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ABSTRACT

This report describes a study conducted by the Boulder Valley (Colorado) Public Schools to determine the impact and value of the district's open-space elementary schools as compared to its traditional school buildings with self-contained classrooms. Specifically, the study sought to determine the effects of varying school designs on (1) the attitudes of elementary students, teachers, and parents toward school, (2) classroom atmosphere, structure, and activity, and (3) the academic achievement of students. The study of academic achievement was completed during the 1973-74 school year; all other data for the study were collected between January and June 1975. Data and findings from the surveys are presented and described in separate sections that focus in turn on teachers' attitudes, students' attitudes, classroom atmosphere and activity, parents' attitudes, and academic achievement. A final section presents tables that summarize data for the entire study and discusses implications of the study's findings. The appendix lists the district's 25 elementary schools by building type and contains samples of the various data collection questionnaires. (JG)

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ALTERNATIVE BUILDING DESIGN: A STUDY OF SELF CONTAINED AND OPEN SPACE CLASS AREA.

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EA 008 671

A three year project accomplished through the cooperation of the Division of Elementary Education and the Office of Evaluation and Guidance, Boulder Valley Public Schools and the Department of Evaluation, NCEBOCS.

BOULDER VALLEY PUBLIC SCHOOLS
Dr. Barnard D. Ryan, Superintendent
July 1976

DEDICATED

TO

EUGENE R. GULLETTE

A STATESMAN IN EDUCATION

ALTERNATIVE BUILDING DESIGN STUDY COMMITTEE - 1974-75

Committee Functions: Developing the instruments and planning for the administration of the instruments

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*Eugene R. Gullette, Assistant Superintendent for Instruction (ad hoc member and initiator of the study)

* Members of the committee in 1973-74

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George Kretke	Committee Consultant - 1973-74, 1974-75 (secondary) General Design of the Study, 1973-74 Data Analysis and Interpretation, 1973-74, 1975-76
Catherine Felknor	Primary Committee Consultant - 1974-75 Development of Instruments Design of Sampling Procedures Coordination of Data Collection and Processing Assistance in Data Analysis Assistance in Writing Data Collection Sections of the Report

FOREWORD

The open or flexible space schools, as they are commonly called in the school district, evolved as a result of the major change in the school district's educational program specifications approximately at the time the 1968 school bond issue was approved by the taxpayers in the school district. The first open or flexible space facility was designed and constructed as an addition to the Mesa Elementary School. Subsequent to that, all major additions and completely new schools were designed and constructed on the open or flexible space plan to meet the criteria established in the 1968 Educational Programs Document. The Educational Programs Document was developed by a committee composed of citizens from the school district, teachers, and school administrators, assisted by architects and consultants from the University of Colorado.

The basic purpose for the major change in the design from the traditional, self-contained classroom to more open and flexible space was to meet the individual needs of the students in the district. The trend nationwide was to provide flexibility within the space assignments to meet the individual needs of the children and educational programs. Teachers in the past have basically found that walls surrounding a specific, small area tend to be prohibitive of student movement, grouping and regrouping throughout the academic day. As a result of this concern, many of the new buildings constructed across the nation were designed without major interior partitions or walls. Instead of these, movable furniture that could easily be re-arranged to provide flexibility of space and still maintain some of the elements of small group instruction or privacy and sound control were used in place of partitions or walls.

The Boulder Valley School District in its 1968 Educational Programs Document tends to follow the national movement toward more flexibility in the educational design of school facilities. It was during this bond issue that the facilities constructed were really designed to meet the needs of the students involved, rather than programs being adapted to meet the building construction program. No longer was the self-contained classroom deemed to be the best alternative to house 25 to 30 students for a period of the academic day, but rather the use of movable partitions and furniture of various types, including chalkboards, cork boards, cabinet work, and storage units, were utilized to provide flexibility in adapting the space to better meet the needs of the students and teachers involved.

A major change of this type in building design or program naturally leads to a concern on the part of a number of citizens. That concern expressed is basically one of: "Is the new school design as good or better than the self-contained classroom design constructed in previous bond issues?" As a result of the concern expressed by citizens within the school

district, as well as by Board of Education members, teachers, school administrators and others, a valid study was needed to determine whether the change in design was truly meeting the needs as predicted back in 1968. Evaluations have been conducted by various school districts, private foundations, as well as by colleges and universities across the country, on flexible or open space design structures. Most of these studies have indicated quite strongly that the flexible or open space school is meeting the academic needs of the students as well or better than the self-contained classroom.

Studies of this type are really not of significant value to the Boulder Valley Public Schools since programs, physical facilities and other factors are different in this district than in other districts. Therefore, it was deemed necessary to initiate our own comprehensive evaluation study to determine the actual value of the open space school as compared to the traditional, self-contained classroom building. The study was initially requested informally by the Board of Education and has been in progress for several years.

The results should be forthcoming early in the fall of 1976 and certainly should be of extreme value when the district embarks upon future bond issues and begins to design buildings and programs to meet the needs of the students at that time.

Credit and sincere appreciation for this study are given to the evaluation team and committee members for the extensive time and effort devoted to this valuable report.

Melvin L. Wiesley

Executive Director of
Elementary Education

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Boulder Valley School District
- Principals of all Elementary Schools
- Teachers in all Elementary Schools and especially those at 3rd and 5th grade levels
- Barbara Kurchak, Elementary Reading Specialist
- Beverly Mullen, Secretary
- District Instructional Media Center-Magnetic Tape/Selectric Typewriter and Copy Center Services
- Secretaries in all Elementary Schools
- Students in 3rd and 5th grades

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SECTION I
INTRODUCTION

The purpose of the Alternative Building Design Study was to determine what differences exist in the elementary schools of varying architectural design in the Boulder Valley Public School District in 1) the attitudes of students, teachers and parents toward school, 2) classroom atmosphere, structure and activity and 3) the academic achievement of students. The evaluation design of the study is shown in Table I.

The study of academic achievement was completed during the 1973-74 school year and is presented in Section VI of the report.

Four areas of study are described in Sections II through V: teachers' attitudes toward school; students' attitudes toward school; classroom atmosphere, structure and activity; and parents' attitudes toward school. Project planning, instrument development, data collection and data processing were conducted between January and June 1975. Computer analysis, data interpretation and report writing occurred during the 1975-76 academic year.

Classification of Schools

In terms of the purposes of the study as presented in Sections II through V, the district elementary schools were classified into four categories:

1. The Self-Contained-Regular category includes eight schools which met both of these criteria: a) newer buildings with physical facilities similar to one another and the self-contained elements of combination buildings and b) schools without large scale specially funded educational programs.

2. The Self-Contained-Special category includes eight schools meeting one or more of the following criteria which could have direct influence upon the information gathered in the study: a) an older building with limited capacity for modification, b) a limited availability of special purpose areas, c) atypical class size, d) a unique student population in terms of socioeconomic status and e) a district educational program supplemented by large scale specially funded programs (e.g., Title I funds affect availability of materials, staff allocation and student activities in the classroom).

3. The Combination category includes four schools with both self-contained and open space class areas.

4. The Open Space category includes five schools in which all class areas are open space with the

TABLE I

EVALUATION DESIGN
ALTERNATIVE BUILDING DESIGN STUDY

SOURCE OF DATA	INSTRUMENTATION	GROUPING OF DATA	ANALYSES
A. Teacher Attitude	32 Item Form developed by the committee. Administered to all elementary faculty assigned to a single school.*	1. Grade Level 2. Classroom Types a) Self-Contained b) Open Space 3. Building Types a) Self-Contained - Regular b) Self-Contained - Special c) Combination d) Open Space	1. Score instrument into four subscales. 2. Item analysis 3. Reliability determination using Cronbach's Alpha meth 4. Analysis of variance for each subscale with 2 sets of independent variables. a. Class type x grade leve b. Building type x grade level.
B. Student Attitude	46 Item Form developed by the committee. Administered to all 3rd & 5th grade classes (every other form for every class included in subsequent processing)*.	1. Grade Level 2. Classroom Type a) Self-Contained b) Open Space 3. Building Types a) Self-Contained - Regular b) Self-Contained - Special	1. Score instrument into eight subscales. 2. Item analysis 3. Reliability determination using Cronbach's Alpha meth 4. Analysis of variance for e subscale with 2 sets of independent variables. a. Class type x grade leve x teacher. b. Building type x grade level x teacher.
C. Classroom Observation	56 Item Form developed by the committee. Observation in a random sample of 3rd & 5th grade classes*.	1. Grade Level 2. Classroom Types (2 categories) 3. Building Types (4 categories)	1. Score instrument into 28 subscales. 2. Item analysis. 3. Reliability determination using Hoyt's Analysis of Variance procedure. 4. Analysis of variance for each subscale.
D. Parent Attitude	26 Item Form developed by the committee. Telephone interview of a random sample of parents of students in 3rd & 5th grade*.	1. Grade Level 2. Classroom Types (2 categories) 3. Building Types (4 categories)	1. Analysis of variance for each subscale with 2 sets of independent variables. a) Building type x grade level. b) Classroom type x grade level.
E. Academic Achievement	SRA Achievement Tests - Fall 1973. Average scores for all fifth grade classrooms in elementary schools (Fifth grade classes in the middle schools were not included).	Classroom Type a) Self-Contained b) Open Space	Analysis of variance to compar self-contained and open space classes with consideration of the following as covariates: 1) Scholastic Aptitude (Prima: Mental Ability). 2) Special utilization. 3) Teaching experience.

*The following schools do not meet the classroom or building type classification criteria and, therefore, were not included in the study: Gold Hill, Jamestown, Lafayette Middle and Louisville Middle.

exception of the kindergarten and special education programs.

A listing of the schools assigned to each category is shown in Appendix I.

In addition to analyzing the data by building type, the data were classified and analyzed by classroom type: self-contained or open space.

Neither students nor teachers were randomly assigned to building type or class type. Since the selection of participants was not random, many factors such as student ability, teacher experience, community attitudes, and teacher ability could not be statistically controlled. Therefore, the effects of those factors related to selection are unknown.

Development of Subscales

The reliability of individual items on the instruments could not be determined. Therefore, subscales composed of multiple items were developed for the classroom observation form, the teacher questionnaire and the student questionnaire. The first step in this procedure was to group the items logically into subscales. The second step was to conduct an item analysis of the responses to each of the subscales.

The item analysis accomplished two statistical checks. The first was to determine if all of the items in the subscale

were related to each other and therefore could be considered as a group. The second statistical check was to determine the overall reliability of the subscales which had met the logical grouping and statistical grouping criteria.

Basic Suppositions

The approach to presenting the data relating to difference or lack of difference among the building types and/or between the two classroom types in the identified areas of study was based on the following suppositions:

1. In terms of relative contribution to the study, areas in which there were no statistically significant differences were considered equally important to those areas in which there were statistically significant differences. In other words, "no difference" and "difference" are of equal importance in the overall study. (An alpha level of .05 was used throughout the analysis).
2. Statistically significant differences should not be judged in terms of "good" or "bad" but analyzed in terms of "appropriate" or "inappropriate" from the perspective of district goals and objectives.

A Note of Caution On Interpreting Significant Differences

When a difference between two groups is labeled "significantly different, statistically," the difference in the two group means (averages) is greater than would be expected by chance.

The determination of significant difference is based on a comparison of mean values and variation within the groups. Therefore, simply reviewing mean values provides inadequate information for determining a significant difference.

Some comparisons are labeled "no significant differences." The mean values are reported for the purpose of indicating the relative position of the total group response on the scale. However, comparisons between these subgroup mean values which suggest significant differences are inappropriate.

SECTION II
TEACHER ATTITUDES

INSTRUMENT DESIGN AND DATA COLLECTION PROCEDURES

The teacher questionnaire was developed by the study committee using a variety of instruments as prototypes. A copy of the questionnaire is included in Appendix II.

In March of 1975, the study committee and the NCEBOCS Evaluation Consultant met with the elementary principals to discuss the design of the study and develop a schedule for data collection. The principals were assured that the individual building anonymity would be protected for all sources of data. The data collection activities were scheduled in the following sequence within each building: teacher attitude, student attitude, classroom observations and parent attitude.

During the organizational meeting, principals elected a time, either before or after school, between April 7 and April 18 for the administration of the teacher attitude questionnaire.

In most instances, the questionnaire was administered during a regular faculty meeting. However, due to the availability of evaluation staff, a maximum of three schools could participate during any given time period. Thus, a few principals arranged for a special faculty meeting or rescheduled the meeting time.

Either the NCEBOCS Evaluation Consultant or the Evaluation Intern administered the faculty questionnaire in most buildings. Four staff persons from the district Office of Evaluation and Guidance assisted in the administration whenever three schools were scheduled simultaneously or when NCEBOCS staff was unavailable.

During the orientation of teachers prior to the administration of the questionnaire, the evaluators presented several key points:

1. The study committee is composed of elementary principals representing all building types: self-contained, open space and combination.

2. The purpose of the study is to determine differences among building types rather than to make value judgments as to "best" or "worst."

3. An overview of the study design and data collection schedule was presented noting that a) third and fifth grade students would be completing the student questionnaire within the next two weeks, b) some of the third and fifth grade classrooms could be included in the random sample for classroom observation and c) some of the parents of third and fifth graders could be included in the random sample of parents to be surveyed.

4. The faculty was assured that the anonymity of the following individuals or units of individuals would be protected: buildings, teachers, classrooms, students and parents.

Teacher respondents were not asked to identify themselves on the questionnaire. Teachers were asked to identify their:

1. Grade level assignment: primary teachers, intermediate teachers or specialists.

2. Type of class assignment: open space class area or self-contained classroom.

3. Preference for building type, assuming that their current building were going to close and a new building would be opening and offering a compatible staff and reasonable teaching load.

All elementary teachers with a single building assignment to one of the buildings included in the study completed the questionnaire. Teachers with multiple building assignments were excluded.

The number of teachers included in the data analysis was 532.

RESULTS

In this section, each of the subscales is defined and data related to each subscale are presented. The teachers had a choice of four

responses for each item: 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree. The reliability of the subscales was determined by Cronbach's Alpha Method.

The reader will note that some of the items are stated in the negative. Within the subscale definition, an "R" has been placed before those items indicating that the numerical scale was reversed for purposes of analysis.

Definition: Subscale 1, Teacher Involvement in School Planning and Evaluation Activities, was composed of the following items:

1. Teachers are encouraged and assisted in developing objectives and goals for our school.

5. Adequate preparation is provided by the building administration for beginning teachers, those new to the district, or those new to the building.

10. In our school, teachers are actively involved in curriculum development.

13. Teachers participate in setting the long range goals and objectives for the school.

18. Time spent at in-service work is related directly to areas of faculty concern.

29. Within our building, teachers observe other classrooms.

32. The attainment of school goals is evaluated on a regular basis.

Presentation of the Data:

Reliability of the scale: .76

Teacher Assignment Level: No significant difference

Primary	(mean = 2.77)
Intermediate	(mean = 2.67)
Specialist	(mean = 2.80)

Classroom Type:

Reports of teachers in open space classrooms (mean = 2.89) were significantly higher than reports of teachers in self-contained classrooms (mean = 2.66).

Building Type:

Reports of teachers in open space buildings (mean = 3.02) were significantly higher than reports of teachers in self-contained - regular (mean = 2.71), self-contained - special (mean = 2.69) and combination (mean = 2.56).

Definition: Subscale 2, Communication, was composed of the following items:

2. Responsibilities in program implementation are clearly defined.

6. Teachers are sensitive to and show respect for the opinions and beliefs of students.

9. Para-professionals feel free to discuss with their teachers problems that may exist.

14. Teachers take initiative in suggesting changes to improve effectiveness rather than waiting for instructions.

20. Teachers solicit feedback on their teaching strategies and objectives from other teachers.

23. Teachers are sensitive to and show respect for the opinions and beliefs of other teachers.

26. Teachers deal openly and frankly with conflict and/or issues in meetings.

31. Teachers feel free to discuss with the principal any problems affecting their teaching.

Presentation of the Data:

Reliability of the scale: .81

Teacher Assignment Level: No significant difference

Primary	(mean = 3.05)
Intermediate	(mean = 2.91)
Specialist	(mean = 3.02)

Classroom Type: No significant difference

Open Space	(mean = 3.09)
Self-contained	(mean = 2.99)

Building Type: No significant difference

Self-contained - Regular	(mean = 3.00)
Self-contained - Special	(mean = 2.97)
Combination	(mean = 2.85)
Open Space	(mean = 3.16)

Definition: Subscale 3, Building Design and Facilities, was composed of the following items:

4. Audiovisual equipment and teaching materials are easily accessible in our building.

8. Architectural design of my building facilitates individualized instruction.

12. There is adequate flexibility in our school building design to allow teachers to work in teams if they so desire.

15. Storage space is adequate in our building.

17. Physical facilities in our building permit variable groupings of students for most learning situations.

19. (R) Overcrowding is a problem in our building.

22. Floor space is utilized efficiently in our building.

24. (R) My instructional program is disturbed by the noise of others.

27. Our school Library/Media Center facility is adequate for the instructional program.

30. I am satisfied with the basic architectural concept of this building.

Presentation of the Data:

Reliability of the scale: .79

Teacher Assignment Level: No significant difference

Primary	(mean = 2.81)
Intermediate	(mean = 2.74)
Specialist	(mean = 2.76)

Classroom Type: No significant difference

Open Space (mean = 2.75)
Self-contained (mean = 2.77)

Building Type: No significant difference

Self-contained - Regular (mean = 2.79)
Self-contained - Special (mean = 2.72)
Combination (mean = 2.85)
Open Space (mean = 2.73)

Definition: Subscale 4, Job Satisfaction, was composed of the following items:

3. (R) Discipline is a major problem in my school.

7. I obtain personal satisfaction from my position as a member of this faculty.

11. I can effectively handle my teaching load.

16. I look forward to each school day.

21. There is time and opportunity to provide attention to those students who need extra help.

25. (R) Students are often discourteous.

28. (R) The program schedule hinders my effectiveness as a teacher.

Presentation of the Data:

Reliability of the scale: .71

Teacher Assignment Level:

Reports of primary teachers (mean = 3.06) were significantly higher than those of intermediate teachers (mean = 2.94) and specialists (mean = 2.95).

Classroom Type: No significant difference

Open Space (mean = 2.95)
Self-contained (mean = 3.04)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.98)
Self-contained - Special	(mean = 2.99)
Combination	(mean = 2.95)
Open Space	(mean = 3.01)

Three of the items on the teacher questionnaire were closely related to items on the classroom observation form or other questionnaires. A statistical comparison by classroom type and building-type was made on these individual items.

19. (R)Overcrowding is a problem in our building.

Classroom Type: No significant difference

Open Space	(mean = 2.15)
Self contained	(mean = 2.38)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.41)
Self-contained - Special	(mean = 2.33)
Combination	(mean = 2.27)
Open Space	(mean = 2.18)

24. (R)My instructional program is disturbed by the noise of others.

Classroom Type: No significant difference

Open Space	(mean = 2.15)
Self-contained	(mean = 2.23)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.25)
Self-contained - Special	(mean = 2.20)
Combination	(mean = 2.17)
Open Space	(mean = 2.11)

27. (R)Our school Library/Media Center facility is adequate for the instructional program.

Classroom Type: No significant difference

Open Space	(mean = 2.85)
Self-contained	(mean = 2.81)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.80)
Self-contained - Special	(mean = 2.81)
Combination	(mean = 2.84)
Open Space	(mean = 2.87)

TABLE II

TEACHERS' PREFERENCE FOR BUILDING TYPE

BY LEVEL OF TEACHER ASSIGNMENT

BUILDING PREFERENCE	LEVEL OF TEACHER ASSIGNMENT						TOTALS	
	PRIMARY		INTERMEDIATE		SPECIALIST			
	f	%	f	%	f	%	f	%
Self-contained	117	48	92	53	31	365	240	48
Combination	98	40	71	40	46	54	215	42
Open Space	28	12	12	7	8	9.5	48	10
TOTALS	243	48	175	35	85	17	503 =	100%

f = frequency

TABLE III

CLASSROOM TEACHERS' PREFERENCE FOR BUILDING TYPE

BY TYPE OF CLASS ASSIGNMENT*

BUILDING PREFERENCE	TYPE OF CLASS ASSIGNMENT				TOTALS	
	SELF-CONTAINED		OPEN SPACE			
	f	%	f	%	f	%
Self-contained	205	65	18	14	223	50
Combination	104	33	77	59	181	41
Open Space	7	2	35	27	42	9
TOTALS	316	71	130	29	446	= 100%

*Only classroom teachers currently teaching in self-contained or open space classrooms were included.

f = frequency

TABLE IV

TEACHERS' PREFERENCE FOR BUILDING TYPE

BY TYPE OF BUILDING ASSIGNMENT

BUILDING PREFERENCE	TYPE OF BUILDING ASSIGNMENT								TOTALS	
	SELF-CONTAINED REGULAR		SELF-CONTAINED SPECIAL		COMBINATION		OPEN SPACE			
	f	%	f	%	f	%	f	%	f	%
Self-contained	123	67	79	65	26	27	14	13	242	48
Combination	57	31	41	33	65	67	54	52	217	43
Open Space	3	2	2	2	6	6	37	35	48	9
TOTALS	183	36	122	24	97	19	105	21	507 =	100%

f = frequency

SECTION II
SUMMARY OF ATTITUDE DATA

Dimensions on which the comparison groups showed statistically significant differences are summarized for three categories of teaching assignment: grade level, class type and building type. The results are also summarized in Table V.

A Comparison of the Attitudes Among Teachers with Varying Teaching Assignments

Primary teachers reported a higher degree of job satisfaction than intermediate teachers and specialists.

Teachers within the three teaching assignments reported no differences in communication, teacher involvement in school planning and evaluation, or building design and facilities.

A Comparison of the Attitudes of Teachers in Open Space and Self-contained Classrooms

Teachers in open space classrooms reported a higher degree of involvement in school planning and evaluation activities than teachers of self-contained classrooms.

Teachers of the two classroom types reported no differences in communication, building design and facilities, and job satisfaction.

A Comparison of the Attitudes of Teachers Housed in Four Types of Buildings

Teachers in open space buildings reported a higher degree of involvement in school planning and evaluation activities than teachers in the other three building types.

TABLE V

STATISTICALLY SIGNIFICANT DIFFERENCES

TEACHER ATTITUDES

n = 532

SUBSCALE LABEL	RELIABILITY OF SUBSCALE	LEVEL OF TEACHER ASSIGNMENT	CLASS TYPE	BUILDING TYPE
		Primary Intermediate Specialist	SC = Self-contained OS = Open space	SC-R = Self-contained-regular SC-S = Self-contained-special OS = Open space C = Combination
Teacher Involvement in School Planning and Evaluation	.76	No significant difference (N.S.D.)	OS > SC	OS > SC-R, SC-S, C
Communication	.81	N.S.D.	N.S.D.	N.S.D.
Building Design and Facilities	.79	N.S.D.	N.S.D.	N.S.D.
Job Satisfaction	.71	Primary > Intermediate, Specialist	N.S.D.	N.S.D.

There were no differences in the attitudes of teachers, classified by building type, in the areas of communication, building design and facilities, and job satisfaction.

Individual Items Related to other Data Sources

There were no differences in the attitudes of teachers, classified by classroom type and building type, toward overcrowding, noise and adequacy of the Library/Media Center.

Teachers' Preference for Building Type

Teacher Assignment Level

Primary and intermediate teachers preferred self-contained buildings to combination or open space buildings. The discrepancies between their preference for self-contained versus open space buildings were greater than self-contained versus combination. Primary and intermediate teachers were almost equally distributed in their preferences for self-contained versus combination and open space buildings.

The teacher specialists showed a preference for combination buildings. The specialists were almost equally distributed in their preference for combination versus self-contained and open space buildings.

Classroom Type

Teachers in self-contained classrooms preferred self-contained buildings. Teachers in open space class areas preferred combination buildings.

As a total group, classroom teachers preferred self-contained buildings to combination or open space buildings. The discrepancies between their preference for self-contained versus open space buildings were greater than self-contained versus combination buildings.

Seventy-one per cent of the teacher respondents were assigned to a self-contained classroom. However, the classroom teachers' preference for building type was as follows: Self-contained, 50%; combination, 41%; open space, 9%.

Building Type

Teachers assigned to self-contained buildings prefer self-contained buildings. Teachers assigned to combination or open space buildings prefer combination buildings.

The assignment of teachers to self-contained, combination and open space buildings were 60%, 19% and 21%, respectively. However, the teachers' preference for building types was as follows: Self-contained, 48%; combination, 43%; and open space, 9%.

SECTION III
STUDENT ATTITUDES

INSTRUMENT DESIGN AND DATA COLLECTION PROCEDURES

In order to represent both primary and intermediate students, grades three and five were selected to participate in the student attitude assessment. Also, because third and fifth graders are similar enough in their ability to respond to questionnaires, the committee was able to develop a single questionnaire with a reading level appropriate for most students in both grades. A copy of the student questionnaire is provided in Appendix III.

The student questionnaires were administered between April 8 and April 22, 1975 in all third and fifth grade classrooms in every district elementary school with the exception of Gold Hill and Jamestown. The administration time in each school was scheduled after the administration of the teacher attitude questionnaire and prior to classroom observations. All of the student questionnaires were administered by one of three specifically trained third party evaluation specialists.

RESULTS

In April 1975, the Pupil Personnel Department reported 3,170 third and fifth grade students enrolled in the schools included in the study. The number of students completing the questionnaire was 2,952 or 93% of the students enrolled.

This number is considerably higher than necessary for statistical analysis. In order to reduce the expense of keypunch and computer time, every other student response was included for data processing and analysis (n = 1476).

In this section, each of the subscales is defined and data related to each subscale are presented. The students had a choice of three responses for each item: 3 = agree, 2 = not sure, 1 = disagree. The reliability of the subscales was determined by Cronbach's Alpha Method.

The reader will note that some of the items are stated in the negative. Within the subscale definition, an "R" has been placed before those items indicating that the numerical scale was reversed for purposes of analysis.

In order to increase the accuracy of statistical analysis, students' responses were grouped with those of other students in their class. The class groups rather than individual student responses were used in the actual data analysis.

Special Note on Statistical versus Educational Significance

When the statistical test, analysis of variance, is applied to determine differences between groups of responses, a basic question is posed: Is the spread or variation of responses between the groups enough greater than the variations within

groups so that the difference cannot be attributed to chance? One factor which affects the potential for accurately determining differences among groups is the number of respondents. As the number of respondents increases, a smaller spread of responses is necessary for indicating a significant statistical difference.

As an example, assume the following: 1) four groups or categories of students, 2) an equal number of students in each category, 3) a five point scale for student response and 4) a distribution of responses similar to the patterns found in the student attitude data of this study. How much difference must exist in the average (mean) student responses among the four categories for any difference to be determined statistically significant?

	TOTAL NUMBER OF STUDENT RESPONDENTS			
	20	100	500	1500
DIFFERENCE IN GROUP MEANS NECESSARY FOR STATISTICAL SIGNIFICANCE.*	.45	.20	.10	.06

* Assume the following: .05 level of significance; Two-tailed test; standard deviation = 1.0.

When the number of respondents reaches 1500, a very small numerical difference can be statistically significant. Sometimes, the statistically significant differences are too small to have any meaning in making decisions about educational programs. Therefore, those statistically significant differences which are great enough to have meaning are identified as having educational significance according to the following classifications:

Level 1 = high (1/3 standard deviation)
Level 2 = moderate (1/4 standard deviation)
Level 3 = questionable (1/5 standard deviation)

Definition: Subscale 1, General School Atmosphere, was composed of the following items:

2. Most of the teachers at my school are very friendly and understanding.

5. I really like my school.

11. Most mornings I look forward to coming to school.

20. It is easy for me to use the school library.

24. This school has helped me develop hobbies and interests.

38. This school is a friendly place.

40. My school is a comfortable place.

45. Teachers at this school like to teach.

46. I am very proud of my school.

Presentation of the Data:

Reliability of the scale: .75

Grade Level:

Ratings by grade 3 students (mean = 2.54) were significantly higher than those by grade 5 students (mean = 2.41). Educational significance: Level 3, questionable.

Classroom Type:

Ratings by students in open space classrooms (mean = 2.51) were significantly higher than those by students in self-contained classrooms (mean = 2.45). Educational significance: Level 3, questionable.

Building Type:

Ratings by students in open space (mean = 2.55) were significantly higher than ratings by students in self-contained - special (mean = 2.48), self-contained - regular (mean = 2.44) and combination (mean = 2.42) buildings. Educational significance: Level 2, moderate.

Definition: Subscale 2, Self Independence and Reliability, was composed of the following items:

9. I am able to go ahead and get started on my work without the teacher telling me what to do.

15. I can think of many ways to solve my problems.

16. I am a hard worker.

21. When I try to do something I am successful.

32. I can be depended on.

Presentation of the Data:

Reliability of the scale: .68

Grade Level:

Ratings by students in grade 3 (mean = 2.38) were significantly higher than ratings by grade 5 students (mean = 2.29). Educational significance: Level 3, questionable.

Classroom Type: No significant difference

Open Space	(mean = 2.34)
Self-contained	(mean = 2.33)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.32)
Self-contained - Special	(mean = 2.33)
Combination	(mean = 2.37)
Open Space	(mean = 2.34)

Definition: Subscale 3, Work and Study Conditions, was composed of the following items:

23. (R) My teacher(s) spends a lot of time telling students to be quiet or to behave.

26. (R) I find it very hard to talk in front of the class.

35. (R) It takes me a long time to get used to anything new.

36. It is possible to do my school work without being bothered by other students.

42. (R) There is a lot of time wasted at this school.

43. (R) Most of the time at school, noise bothers me while I'm doing my school work.

Presentation of the Data:

Reliability of the scale: .74

Grade Level:

Ratings by students in grade 5 (mean = 2.08) were significantly higher than those by grade 3 students (mean = 1.98). Educational significance: Level 3, questionable.

Classroom Type: No significant difference

Open Space (mean = 2.02)
Self-contained (mean = 2.03)

Building Type:

Ratings by students in self-contained - special (mean = 2.09) buildings were significantly higher than the ratings of students in open space (mean = 2.04), self-contained - regular (mean = 2.00), and combination (mean = 2.00) buildings. Educational significance: Level 3, questionable.

Definition: Subscale 4, Opportunity for Interaction with Others, was composed of the following items:

17. The principal and teachers here let me know if they think I've done a good job.

25. There is a place for me to keep my personal things.

27. There are chances for students in the same grade level to work together.

29. At this school we get to do special activities that I enjoy.

31. There are chances for older and younger students to work together.

41. People from the community come to our school to share things.

44. There is enough space in this school for children to work in small groups.

Presentation of the Data:

Reliability of the scale: .82

Grade Level:

Ratings by students in grade 3 (mean = 2.47) were significantly higher than ratings by students in grade 5 (mean = 2.37). Educational significance: Level 2, moderate.

Classroom Type:

Ratings by students in open space classrooms (mean = 2.50) were significantly higher than those by students in self-contained classrooms (mean = 2.37). Educational significance: Level 1, high.

Building Type:

Ratings by students in open space buildings (mean = 2.56) were significantly higher than those by students in self-contained - special (mean = 2.41), combination (mean = 2.39) and self-contained - regular (mean = 2.35) buildings. Educational significance: Level 1, high.

Definition: Subscale 5, Student Application of Learning, was composed of the following items:

3. (R) If I don't understand an assignment I put off doing the work as long as possible.

6. (R) There is no good place at school for me to be by myself to think through a problem or work alone.

8. Many of the things I learn in school will help me in things I might do outside of school.

12. I feel that most of what we learn in school is important and will be useful to me.

33. At school I have a chance to use what I learn in class.

Presentation of the Data:

Reliability of the scale: .76

Grade Level: No significant difference

Grade 3 (mean = 2.55)
Grade 5 (mean = 2.58)

Classroom Type: No significant difference

Open Space (mean = 2.56)
Self-contained (mean = 2.57)

Building Type: No significant difference

Self-contained - regular (mean = 2.59)
Self-contained - special (mean = 2.53)
Combination (mean = 2.54)
Open Space (mean = 2.57)

Definition: Subscale 6, Math, was composed of the following items:

13. I usually enjoy the things we do in math class.

37. I feel that I am learning a lot in math class.

Presentation of the Data:

Reliability of the scale: .64

Grade Level: No significant difference

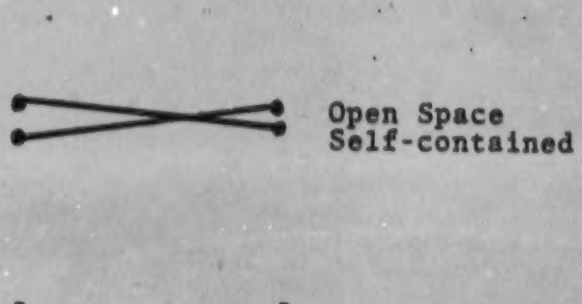
Grade 3 (mean = 2.49)
Grade 5 (mean = 2.43)

Classroom Type: No significant difference

Open Space (mean = 2.47)
Self-contained (mean = 2.45)

Significant Interaction:

Ratings by grade 3 students in self-contained classrooms (mean = 2.50) were higher than ratings by grade 3 open space students (mean = 2.46) while ratings by grade 5 open space students (mean = 2.48) were higher than those by grade 5 students in self-contained classrooms (mean = 2.39), i.e., a significant reversal across grades. Educational significance: Level 3, questionable.



Building Type: No significant difference

Self-contained - regular	(mean = 2.42)
Self-contained - special	(mean = 2.45)
Combination	(mean = 2.45)
Open Space	(mean = 2.51)

Definition: Subscale 7, Reading, was composed of the following items:

7. I feel that I am learning a lot in reading class.

19. I usually enjoy the things we do in reading class.

Presentation of the Data:

Reliability of the scale: .62

Grade Level:

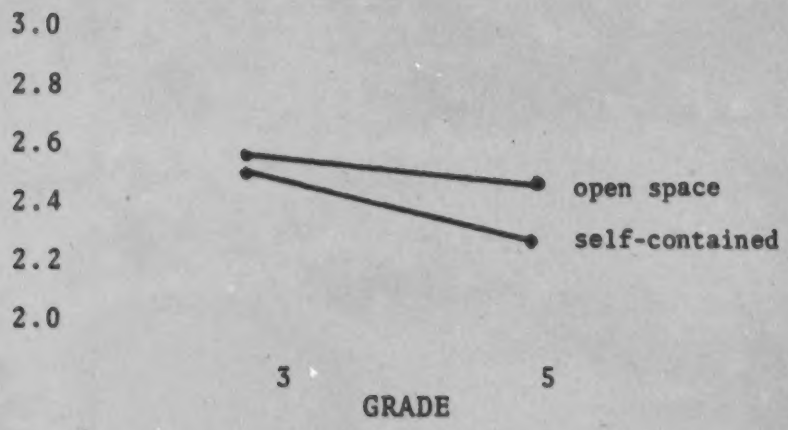
Ratings by students in grade 3 (mean = 2.56) were significantly higher than ratings by students in grade 5 (mean = 2.32). Educational significance: Level 3, questionable.

Classroom Type:

Ratings by students in open space class areas (mean = 2.50) were significantly higher than students in self-contained classrooms (mean = 2.40). Educational Significance: Level 3, questionable.

Significant Interaction:

No significant difference was shown between the ratings by students in grade 3 open space (mean = 2.58) and self-contained (mean = 2.54) classrooms, but a significant difference was shown between the ratings by students in grade 5. Ratings by grade 5 students in open space classrooms (mean = 2.43) were significantly higher than those by grade 5 students in self-contained classrooms (mean = 2.24). Educational significance: Level 1, high.



Building Type:

Ratings of reading by students in open space buildings (mean = 2.54) were significantly higher than those by students in self-contained - regular (mean = 2.38), self-contained - special (mean = 2.43) and combination (mean = 2.41) buildings. Educational significance: Level 2, moderate.

Definition: Subscale 8, Self and Others, was composed of the following items:

10. Lots of students at this school want to be my friend.

18. I think that I am an interesting person.

30. Other students usually follow my ideas or do things that I suggest.

Presentation of the Data:

Reliability of the scale: .69

Grade Level: No significant difference

Grade 3 (mean = 2.02)
Grade 5 (mean = 2.01)

Classroom Type:

Ratings of self and others by students in open space classrooms (mean = 2.03) were significantly higher than those by students in self-contained classrooms (mean = 2.01). Educational significance: Level 3, questionable.

Building Type:

Ratings of self and others by students in open space (mean = 2.05) and self-contained - regular

buildings (mean = 2.04) were significantly higher than those by students in combination (mean = 1.98) and self-contained - special buildings (mean = 1.96). Educational significance: Level 3, questionable.

Definition: Subscale 9, Building Facility, was composed of the following items:

1. (R) My school is too crowded.

28. (R) In my school, it is too far to walk from one place to another.

34. In my school, it is easy to find different places.

Presentation of the Data:

Reliability of the scale: .63

Grade Level: No significant difference

Grade 3 (mean = 2.56)
Grade 5 (mean = 2.58)

Classroom Type: No significant difference

Open Space (mean = 2.58)
Self-contained (mean = 2.56)

Building Type: No significant difference

Self-contained - Regular (mean = 2.55)
Self-contained - Special (mean = 2.60)
Combination (mean = 2.52)
Open Space (mean = 2.60)

Definition: Subscale 10, Acquaintance with Others, was composed of one item:

22. I know most of the students in my grade level at this school.

Presentation of the Data:

Grade Level:

Ratings by students in grade 5 (mean = 2.78) were significantly higher than ratings by students in grade 3 (mean = 2.68). Educational significance: Level 3, questionable.

Classroom Type: No significant difference

Open Space (mean = 2.76)
Self-contained (mean = 2.71)

Building Type:

Ratings by students in open-space (mean = 2.81) and self-contained - special (mean = 2.77) buildings were significantly higher than those of students in self-contained - regular buildings (mean = 2.72) which were significantly higher than ratings by students in combination buildings (mean = 2.64). Educational significance: Level 1, high.

Definition: Subscale 11, Preference for One Teacher, was composed of one item:

14. If I had a choice, I would like just one teacher to teach all the regular classroom subjects.

Presentation of the Data:

Grade Level:

Ratings by students in grade 3 (mean = 1.96) were significantly higher than ratings by students in grade 5 (mean = 1.85). Educational significance: Level 1, high.

Classroom Type:

Ratings by students in self-contained classrooms (mean = 2.01) were significantly higher than ratings by students in open space classrooms (mean = 1.74). Educational significance: Level 1, high.

Building Type:

Ratings by students in self-contained - regular (mean = 2.01), self-contained - special (mean = 1.95) and combination (mean = 1.98) buildings were significantly higher than the ratings by students in open space buildings (mean = 1.66). Educational significance: Level 1, high.

Four of the items on the student questionnaire were closely related to items on the classroom observation form or other questionnaires. A statistical comparison between grade level classroom type and building type was made on these individual items.

1.(R)My school is too crowded.

Grade Level: No significant difference

Grade 3	(mean = 2.40)
Grade 5	(mean = 2.39)

Classroom Type: No significant difference

Open space	(mean = 2.44)
Self-contained	(mean = 2.41)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.38)
Self-contained - Special	(mean = 2.40)
Combination	(mean = 2.43)
Open space	(mean = 2.41)

20. It is easy for me to use the school library.

Grade Level: No significant difference.

Grade 3	(mean = 2.59)
Grade 5	(mean = 2.62)

Classroom Type: No significant difference

Open space	(mean = 2.60)
Self-contained	(mean = 2.63)

Building Type: No signficant difference

Self-contained - Regular	(mean = 2.59)
Self-contained - Special	(mean = 2.63)
Combination	(mean = 2.62)
Open space	(mean = 2.57)

36. It's possible to do school work without being bothered by others.

Grade Level

The ratings of students in grade five (mean = 1.83) were significantly higher than the ratings of students in grade three (mean = 1.72).

Classroom Type: No significant difference

Open space	(mean = 1.78)
Self-contained	(mean = 1.75)

Building Type: No significant difference

Self-contained - Regular	(mean = 1.68)
Self-contained - Special	(mean = 1.75)
Combination	(mean = 1.74)
Open space	(mean = 1.70)

43. (R)Most of the time, noise bothers me while I'm doing my school work.

Grade Level

The ratings of fifth grade students (mean = 2.25) were significantly higher than those of third grade students (mean = 2.13) indicating that fifth graders are not as distracted by noise.

Class Type: No significant difference

Open space	(mean = 2.26)
Self-contained	(mean = 2.17)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.19)
Self-contained - Special	(mean = 2.22)
Combination	(mean = 2.16)
Open space	(mean = 2.18)

SUMMARY OF STUDENT ATTITUDE DATA

Because of the large number of students, any apparent difference became a statistically significant difference. For this reason, statistically significant differences were further classified in terms of educational significance: Level 1, high; Level 2, moderate; Level 3, questionable. Dimensions on which the comparison groups showed statistically significant differences and lack of differences are summarized for the three categories: grade level, classroom type and building type. The results are also summarized in Table VI.

A Comparison of the Attitudes of Third and Fifth Grade Students

Grade three student attitudes were significantly more positive than fifth grade students on four subscales. Of those differences, three were classified as having questionable educational significance: general school atmosphere, self-independence and reliability

TABLE VI

STATISTICALLY SIGNIFICANT DIFFERENCES

STUDENT ATTITUDES

n = 1476

SUBSCALE	RELIABILITY OF THE SUBSCALE	GRADE LEVEL Grades 3 and 5	CLASS TYPE SC = Self-Contained OS = Open Space	INTERACTION Grade Level X Class Type	BUILDING TYPE SC-R = Self-contained-regular SC-S = Self-contained-special OS = Open space C = Combination
1. GENERAL SCHOOL ATMOSPHERE	.75	3>5 [3]	OS> SC [3]	N.S.D.	OS> SC-S, SC-S, C [2]
2. SELF INDEPENDENCE AND RELIABILITY	.68	3>5 [3]	N.S.D.	N.S.D.	N.S.D.
3. HOME AND STUDY CONDITIONS	.74	5>3 [3]	N.S.D.	N.S.D.	SC-S> OS, SC-S, C [3]
4. OPPORTUNITY FOR INTERACTION WITH OTHERS	.82	3>5 [2]	OS> SC [1]	N.S.D.	OS> SC-S, C, SC-R [1]
5. STUDENT APPLICATION OF LEARNING	.76	No significant difference (N.S.D.)	N.S.D.	N.S.D.	N.S.D.
6. MATH	.64	N.S.D.	N.S.D.	3 SC> 3 OS; 5 OS> 5 SC [3]	N.S.D.
7. READING	.62	3>5 [3]	OS> SC [3]	3 OS = 3 SC; 5 OS > 5 SC [1]	OS> SC-R, SC-S, C [2]
8. SELF AND OTHERS	.69	N.S.D.	OS> SC [3]	N.S.D.	OS, SC-R> C, SC-S [3]
9. BUILDING FACILITY	.63	N.S.D.	N.S.D.	N.S.D.	N.S.D.
10. ACQUAINTANCE WITH OTHERS	-	5>3 [3]	N.S.D.	N.S.D.	OS & SC-S> SC-R> C [1]
11. PREFERENCE FOR ONE TEACHER	-	3>5 [3]	SC> OS [1]	N.S.D.	SC-R, SC-S, C> OS [1]

Numbers in upper right corners = level of educational significance

1 = high
2 = moderate
3 = questionable

and preference for one teacher. Of moderate educational significance was the difference relating to the opportunity for interaction with others.

Grade five student attitudes were significantly more positive than third grade students on two subscales: work and study conditions, and acquaintance with others. Both of these differences were classified as having questionable educational significance.

There were no differences between the third and fifth grade student attitudes on three subscales: student application of learning, self and others, and building facilities.

A Comparison of the Attitudes of Students in Open Space and Self-Contained Classrooms

The attitudes of students in open space classrooms were significantly more positive than those of students in self-contained classrooms on four subscales. The differences on three of the subscales were of questionable educational significance: general school atmosphere, reading, and self and others. However, the degree to which the attitudes of open space and self-contained students were different in opportunities for interaction with others was classified as having high educational significance.

Students in self-contained classrooms were significantly higher in their preference for one teacher than the students in open space areas. The educational significance of this difference was high. However, the mean rating by students in self-contained classrooms

was 2.01 (2.00 = unsure) while the average rating by students in open space classrooms was 1.74 (1.0 = disagree).

There were no differences in the attitudes of students in self-contained and open space classrooms in the following areas: self-independence and reliability, work and study conditions, student application of learning, building facility and acquaintance with others.

Interaction of Grade Levels Across Classroom Types

There were no differences in the attitudes of third grade students in open space and self-contained classrooms toward reading. In both types of classrooms, third grade students were more positive toward reading than the fifth graders. Fifth grade students in open space class areas were more positive toward reading than fifth grade students in self-contained classrooms. The difference was great enough to be of high educational significance.

Third graders in self-contained classrooms were more positive in their attitudes toward math than third grade students in open space classrooms. The reverse was true for fifth graders. The difference was classified as having questionable educational significance.

A Comparison of the Attitudes of Students Housed in Four Types of Buildings

The following statistically significant differences were great enough to be classified as having high educational significance:

1. Students occupying open space and self-contained - special buildings were more positive in rating their acquaintance with others than students in self-contained-regular buildings. However, these students were more positive than students in combination buildings. A review of school enrollment according to building type (see Appendix I) showed that school size was not a factor contributing to this difference.

2. Students in open space buildings reported a greater opportunity for interaction with others than the students in the other three building types.

3. Students in self-contained - regular, self-contained - special and combination buildings were unsure of preferring a choice of one teacher for all regular classroom subjects while more students in open space buildings disagreed to a choice of one teacher.

Of moderate educational significance were the following statistically significant differences: Students in open space buildings were more positive in their attitudes toward reading and the general atmosphere of the school than students in the other three building types.

Two statistically significant differences were classified as having questionable educational significance:

Students in self-contained - special schools reported more desirable study conditions than the students in the other three building types. Students in open space and self-contained - regular buildings were more positive about themselves in relation to others than students in combination and self-contained - special buildings.

Individual Items Related to Other Data Sources

Fifth grade students reported being less disturbed by others and less distracted by noise than third grade students.

There were no differences in the attitudes of students, classified by classroom type and building type, toward overcrowding, ease of using the library, noise distraction or others interfering with school work.

SECTION IV
CLASSROOM ATMOSPHERE, STRUCTURE AND ACTIVITY

INSTRUMENT DESIGN AND DATA COLLECTION PROCEDURES

One purpose of the Alternative Building Design Study was to determine what differences exist in atmosphere, structure and activity in the classrooms of elementary schools of varying architectural design.

The study committee developed a classroom observation form which included pertinent dimensions of classroom atmosphere, structure and activity. A copy of the form is included in Appendix IV.

The NCEBOCS Evaluation Consultant trained four experienced classroom observers in the use of the observation form. Following an orientation, the five observers concurrently, but independently, rated the conditions of one classroom not included in the actual study. A discussion of the ratings served to resolve points of disagreement among the observers and to refine the observation form.

In addition to the practice observation, the NCEBOCS Evaluation Consultant observed jointly with each of the other four observers during their first scheduled observation for the study. In each case, the two individuals discussed and compared their independent ratings immediately following the observation. Each observation form is composed of 56 items; the four concurrent observations included a total of 224 ratings. On 173 of these ratings (77.23%),

the two observers made the same rating; on 50 of the ratings (22.32%), the two observers differed by one point; on one rating (less than .5%) there was a difference of two points.

A total of 45 classes was included in the observation sample. These 45 classes constituted a stratified random sample representing grade level, classroom type and building type. That is, the classes to be observed were randomly selected to represent the same proportion of certain factors in the sample as occur in the total district. These factors included third and fifth grade classes, open space and self-contained classes, and classes from each of the four building types. All elementary schools were involved in the observation sample with the exception of Park Primary, Gold Hill and Jamestown. The specific classes to be observed in each building were identified by a random process.

The observer schedule was developed to insure that each observer was assigned in equal proportions to classroom and building types. However, this arrangement operated within the practical constraint of assigning all observations within an individual building to one observer.

In order to provide all observers an opportunity to rate both self-contained and open space classes during initial stages, all observers were assigned to combination buildings for the first observation. The assignment of observers according to building type was variable for the remainder of the observation schedule.

TABLE VII

DISTRIBUTION OF CLASSROOMS IN DISTRICT AND OBSERVATION SAMPLE*

Building Type Categories	DISTRICT 3rd Grade	DISTRICT 5th Grade	Classroom Type	SAMPLE 3rd Grade	SAMPLE 5th Grade
SC-R	24	25	SC	7	8
SC-S	18	11	SC	6	3
C	7	4	SC	2	2
	11	13	OS	3	4
OS	14	17	OS	5	5
	74	70	Totals	23	22

SUMMARY BY CLASSROOM TYPE

49	40	Self-contained	15	13
25	30	Open Space	8	9

*Total Number of Third and Fifth Grade Classes in District = 144
Total Number of Classrooms observed = 45; slightly over 30%

An additional consideration in developing the observer schedule was to eliminate the assignment of schools to observers if they were familiar with the staff, the building or the instructional program.

The 45 classes were observed between May 2 and May 15, 1975. The length of the observations varied slightly depending upon the schedule within each school or class. However, most observations encompassed a period of one hour to an hour and a half. All observations were conducted while the children were participating in some type of academic work in the class. In a few instances, the observation period was divided into two parts due to a recess or a special activity which required the students to leave the classroom.

RESULTS

The raters had a choice of five responses for each item: 5 = always, consistently, completely; 4 = frequently, to a large degree; 3 = sometimes, to a moderate degree; 2 = seldom, to a slight degree; and 1 = none, not at all.

In this section, each of the subscales is defined and data related to each subscale are presented.

Definition: Subscale 1, Crowdedness, was composed of the following items:

A-1. Furniture arrangement seems to interfere with classroom operation.

A-2. Crowdedness re: number of students seems to interfere with classroom (area) operation.

A-3. Crowdedness re: furniture, materials, etc., seems to interfere with classroom (area) operation.

A-13.(R) Adequate space is available for students to work in small groups.

Presentation of the Data:

Reliability of the scale: .78

Grade Level: No significant difference

Grade 3 (mean = 1.88)
Grade 5 (mean = 1.95)

Classroom Type:

Self-contained class areas (mean = 2.08) were rated significantly more crowded than open space class areas (mean = 1.58).

Building Type: No significant difference

Self-contained - Regular (mean = 1.16)
Self-contained - Special (mean = 2.00)
Combination (mean = 1.55)
Open Space (mean = 1.78)

Definition: Subscale 2, Noise Interference, was composed of the following items:

A-6. Noise appears to interfere with students' concentration and/or instructional activities.

A-7. Noise appears to interfere with teacher(s)' concentration and/or instructional activities.

Presentation of the Data:

Reliability of the scale: .93

Grade Level: No significant difference

Grade 3 (mean = 1.73)
Grade 5 (mean = 1.88)

Classroom Type:

Open space classrooms (mean = 2.28) were rated significantly higher in noise interference than self-containe classrooms (mean = 1.55).

Building Type:

Open space buildings (mean = 2.61) were rated significantly higher in noise interference than self-contained - regular (mean = 1.50), self-contained - special (mean = 1.62), and combination (mean = 1.66) buildings.

Definition: Subscale 3, Availability and Appropriateness of Display, was composed of the following items:

A-8. Adequate space is available for bulletin boards and displays.

A-9. Student work is displayed (projects, art, books, papers, etc.).

A-10. Displays are related to instructional programs.

Presentation of the Data:

Reliability of the scale: .61

Grade Level:

Grade 3 (mean = 3.53) was rated significantly higher in availability and appropriateness of display materials than grade 5 (mean = 2.81).

Classroom Type: No significant difference

Open Space (mean = 3.32)
Self-contained (mean = 2.93)

Building Type: No significant difference

Self-contained - Regular (mean = 3.33)
Self-contained - Special (mean = 3.29)
Combination (mean = 3.18)
Open Space (mean = 3.18)

Definition: Subscale 4, Access to Media Center, was composed of one item:

A-11. Supplies and materials are easily accessible to students.

This item was also included in subscale 18.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.86)
Grade 5 (mean = 2.85)

Classroom Type:

Open space classrooms (mean = 3.71) were rated significantly higher in access to the media center than self-contained classrooms (mean = 2.41).

Building Type:

Open space buildings (mean = 4.00) were rated significantly higher in access to the media center than self-contained - regular (mean = 2.27), self-contained - special (mean = 2.37), and combination (mean = 3.11) buildings.

Definition: Subscale 5, Frequency of Student Movement, was composed of one item:

B-1. Amount/frequency of movement of students.

Presentation of the Data:

Grade Level:

Grade 3 classes (mean = 3.67) were rated significantly higher in the amount or frequency of student movement than Grade 5 classes (mean = 3.00).

Classroom Type: No significant difference

Open Space (mean = 3.42)
Self-contained (mean = 3.29)

Building Type: No significant difference

Self-contained - Regular (mean = 3.33)
Self-contained - Special (mean = 3.50)
Combination (mean = 3.22)
Open Sapce (mean = 3.33)

Definition: Subscale 6, Frequency of Adult Movement, was composed of one item:

B-2. Amount/frequency of movement of adults.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 3.33)
Grade 5 (mean = 3.15)

Classroom Type: No significant difference

Open Space (mean = 3.22)
Self-contained (mean = 3.29)

Building Type: No significant difference

Self-contained - Regular (mean = 3.40)
Self-contained - Special (mean = 3.12)
Combination (mean = 3.11)
Open Space (mean = 3.22)

Definition: Subscale 7, Ease and Appropriateness of Movement, was composed of the following items:

B-3. Adult(s) move about with ease.

B-4. Students move about with ease.

B-5. Purpose/productivity to the movement of students.

B-6. (R)Movement of class size group(s) seems to interfere with the instructional program.

B-7. (R)Movement of individuals or small group(s) seems to interfere with the instructional program.

Presentation of the Data:

Reliability of the scale: .49

Grade Level:

Grade 3 classes (mean = 4.20) were rated significantly higher in ease and appropriateness of movement than grade 5 classes (mean = 3.78).

Classroom Type: No significant difference

Open Space (mean = 3.91)
Self-contained (mean = 4.16)

Building Type: No significant difference

Self-contained - Regular (mean = 3.97)
Self-contained - Special (mean = 3.82)
Combination (mean = 4.09)
Open Space (mean = 4.09)

Definition: Subscale 8, Class Size Grouping, was composed of one item:

C-2. Class size group.

Presentation of the Data:

Grade Level:

Grade 5 classes (mean = 3.25) were rated as having significantly higher incidence of class size grouping than grade 3 classes (mean = 2.14).

Classroom Type: No significant difference

Open Space	(mean = 2.81)
Self-contained	(mean = 2.42)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.80)
Self-contained - Special	(mean = 2.62)
Combination	(mean = 2.78)
Open Space	(mean = 2.44)

Definition: Subscale 9, Small Group - Students and Adults, was composed of one item:

C-3. Small group - students and adult.

Presentation of the Data:

Grade Level:

Grade level 3 (mean = 3.29) was rated as having a significantly higher incidence of small groups of students meeting with an adult than grade level 5 (mean = 1.75).

Classroom Type: No significant difference

Open Space	(mean = 2.33)
Self-contained	(mean = 2.93)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.13)
Self-contained - Special	(mean = 3.12)
Combination	(mean = 1.78)
Open Space	(mean = 3.44)

Definition: Subscale 10, Small Group - Students Alone, was composed of one item:

C-4. Small group - students alone.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.00)
Grade 5 (mean = 2.05)

Classroom Type: No significant difference

Open Space (mean = 2.42)
Self-contained (mean = 1.81)

Building Type: No significant difference

Self-contained - Regular (mean = 2.00)
Self-contained - Special (mean = 1.87)
Combination (mean = 1.67)
Open Space (mean = 2.56)

Definition: Subscale 11, One-to-One - Student and Adult, was composed of one item:

C-5. One-to-one - student and adult.

Presentation of the Data:

Grade Level:

Grade 3 classes (mean = 2.90) were rated significantly higher in the number of one-to-one, student and adult interactions, than grade 5 classes (mean = 2.35).

Classroom Type: No significant difference

Open Space (mean = 2.64)
Self-contained (mean = 2.63)

Building Type: No significant difference

Self-contained - Regular (mean = 2.67)
Self-contained - Special (mean = 2.50)
Combination (mean = 2.89)
Open Space (mean = 2.44)

Definition: Subscale 12, Independent Study, was composed of one item:

C-6. Independent study - student working alone.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 3.85)
Grade 5 (mean = 3.40)

Classroom Type: No significant difference

Open Space (mean = 3.71)
Self-contained (mean = 3.59)

Building Type: No significant difference

Self-contained - Regular (mean = 3.80)
Self-contained - Special (mean = 3.25)
Combination (mean = 3.67)
Open Space (mean = 3.67)

Definition: Subscale 13, Intellectual and Cognitive Activities, was composed of one item:

C-11. Intellectual/cognitive.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 4.29)
Grade 5 (mean = 4.35)

Classroom Type: No significant difference

Open Space (mean = 4.29)
Self-contained (mean = 4.33)

Building Type: No significant difference

Self-contained - Regular (mean = 4.27)
Self-contained - Special (mean = 4.37)
Combination (mean = 4.33)
Open Space (mean = 4.33)

Definition: Subscale 14, Social Activities, was composed of one item:

C-12. Social/affective.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.09)
Grade 5 (mean = 1.80)

Classroom Type: No significant difference

Open Space (mean = 2.14)
Self-contained (mean = 1.85)

Building Type - No significant difference

Self-contained - Regular (mean = 1.80)
Self-contained - Special (mean = 2.25)
Combination (mean = 1.67)
Open Space (mean = 2.22)

Definition: Subscale 15, Special Activities, was composed of one item:

C-13. Psychomotor/complementary skill/special activity.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 1.57)
Grade 5 (mean = 1.45)

Classroom Type: No significant difference

Open Space (mean = 1.14)
Self-contained (mean = 1.70)

Building Type: No significant difference

Self-contained - Regular (mean = 1.60)
Self-contained - Special (mean = 1.87)
Combination (mean = 1.33)
Open Space (mean = 1.22)

Definition: Subscale 16, Application of Skills in Class, was composed of one item:

C-10. Opportunity to use or apply skills learned in classwork.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 1.67)
Grade 5 (mean = 1.55)

Classroom Type: No significant difference

Open Space (mean = 1.43)
Self-contained (mean = 1.70)

Building Type: No significant difference

Self-contained - Regular (mean = 1.73)
Self-contained - Special (mean = 1.75)
Combination (mean = 1.44)
Open Space (mean = 1.44)

Definition: Subscale 17, Busy Work, was composed of one item:

C-13. Diversion/busy work.

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 1.33)
Grade 5 (mean = 1.30)

Classroom Type: No significant difference

Open Space (mean = 1.28)
Self-contained (mean = 1.33)

Building Type: No significant difference

Self-contained - Regular (mean = 1.27)
Self-contained - Special (mean = 1.37)
Combination (mean = 1.55)
Open Space (mean = 1.11)

Definition: Subscale 18, Access to and Use of Materials, was composed of items:

A-11. Supplies and materials are easily accessible to students.

C-12. Indications that a variety of teaching/learning materials are used within a given curriculum area (math, reading, etc.).

C-13. Indications that teacher and/or student-prepared materials are used as well as commercial materials.

Presentation of the Data:

Reliability of the scale: .76

Grade Level:

Grade 3 classes (mean = 3.54) were rated significantly higher in student access to and use of materials than grade 5 classes (mean = 2.73).

Classroom Type: No significant difference

Open Space (mean = 3.35)
Self-contained (mean = 3.04)

Building Type: No significant difference

Self-contained - Regular (mean = 3.02)
Self-contained - Special (mean = 3.33)
Combination (mean = 2.85)
Open Space (mean = 3.48)

Definition: Subscale 19, Individualization of Materials and Assignments, was composed of items:

C-14. Indications of efforts to match materials to needs of students (ability level, interest, etc.).

C-15. Indications of differential assignments to different students (i.e., students doing different activities based on interest, ability).

Presentation of the Data:

Reliability of the scale: .92

Grade Level:

Grade 3 classes (mean = 3.57) were rated significantly higher in individualization of materials and assignments than grade 5 classes (mean = 2.50).

Classroom Type:

Open space classrooms (mean = 3.82) were rated significantly higher than self-contained classrooms (mean = 2.63).

Building Type:

The open space building (mean = 4.06) ratings were significantly greater than self-contained - regular (mean = 2.33), self-contained - special (mean = 3.00), and combination (mean = 3.22) buildings.

The combination buildings (mean = 3.22) were rated significantly higher than self-contained - regular (mean = 2.33) buildings.

Self-contained - special buildings (mean = 3.00) were not significantly different from self-contained - regular buildings (mean = 2.33) or combination buildings (mean = 3.22).

Definition: Subscale 20, Student Involvement, was composed of the following items:

C-16. Indications of sharing of supplies and materials among students.

D-1. Students appear to be actively involved in designated activities.

D-2.(R) Students appear to be bothering other students, interfering with class activities.

D-3. Students appear to be interested in their activities.

Presentation of the Data:

Reliability of the scale: .51

Grade Level: No significant difference

Grade 3 (mean = 3.38)
Grade 5 (mean = 3.09)

Classroom Type: No significant difference

Open Space (mean = 3.15)
Self-contained (mean = 3.39)

Building Type: No significant difference

Self-contained - Regular (mean = 3.17)
Self-contained - Special (mean = 3.28)
Combination (mean = 3.08)
Open Space (mean = 3.47)

Definition: Subscale 21, Lack of Student Respect, included the following items:

D-4. Students show a lack of pride in their classroom and/or school.

D-5. Indications of a lack of respect for school property.

D-6. Indications of a lack of respect for property of others.

D-7. Indications of a lack of respect/cooperation toward one another.

D-8. Indications of a lack of respect/cooperation toward adults (teacher, aide).

Presentation of the Data:

Reliability of the scale: .82

Grade Level: No significant difference

Grade 3 (mean = 1.37)
Grade 5 (mean = 1.38)

Classroom Type: No significant difference

Open Space (mean = 1.48)
Self-contained (mean = 1.32)

Building Type: No significant difference

Self-contained - Regular (mean = 1.29)
Self-contained - Special (mean = 1.32)
Combination (mean = 1.49)
Open Space (mean = 1.44)

Definition: Subscale 22, Teachers Encouraging Students, was composed of one item:

E-1. Indications of teacher encouraging students (praising, reassuring).

Presentation of the Data:

Grade Level:

Grade 3 classes (mean = 3.19) were rated significantly higher in the incidence of teachers encouraging students than grade 5 classes (mean = 2.60).

Classroom Type: No significant difference

Open Space	(mean = 2.85)
Self-contained	(mean = 3.00)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.93)
Self-contained - Special	(mean = 2.75)
Combination	(mean = 3.00)
Open Space	(mean = 2.89)

Definition: Subscale 23, Teacher Lecturing, was composed of one item:

E-2. Indications of teacher presenting information to students (lecturing).

Presentation of the Data:

Grade Level: No significant difference

Grade 3	(mean = 2.95)
Grade 5	(mean = 3.40)

Classroom Type: No significant difference

Open Space	(mean = 3.21)
Self-contained	(mean = 3.15)

Building Type: No significant difference

Self-contained - Regular	(mean = 3.13)
Self-contained - Special	(mean = 3.12)
Combination	(mean = 3.11)
Open Space	(mean = 3.33)

Definition: Subscale 24, Teacher Guiding and Clarifying, was composed of items:

E-3. Indications of teacher assisting students (guiding, clarifying, etc.)

E-4. Indications of teacher analyzing students or their work (checking, etc.).

Presentation of the Data:

Reliability of the scale: .49

Grade Level: No significant difference

Grade 3 (mean = 3.26)
Grade 5 (mean = 3.12)

Classroom Type: No significant difference

Open Space (mean = 3.39)
Self-contained (mean = 3.09)

Building Type: No significant difference

Self-contained - Regular (mean = 3.20)
Self-contained - Special (mean = 2.93)
Combination (mean = 3.37)
Open Space (mean = 3.22)

Definition: Subscale 25, Teacher Directing or Discouraging Students, was composed of items:

E-5. Indications of teacher directing students (structuring, regulating, enforcing, controlling, manipulating, etc.).

E-6. Indications of teacher discouraging students (ignoring, threatening, moralizing, accusing, reprimanding, negatively criticizing, etc.).

Presentation of the Data:

Reliability of the scale: .54

Grade Level: No significant difference

Grade 3 (mean = 2.35)
Grade 5 (mean = 2.55)

Classroom Type: No significant difference

Open Space (mean = 2.46)
Self-contained (mean = 2.42)

Building Type: No significant difference

Self-contained - Regular (mean = 2.23)
Self-contained - Special (mean = 2.56)
Combination (mean = 2.76)
Open Space (mean = 2.39)

Definition: Subscale 26, Departmentalization, was composed of one item:

E-7. Indications of departmentalization (teachers cooperating by dividing planning and/or instruction according to curriculum areas).

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.14)
Grade 5 (mean = 2.30)

Classroom Type: No significant difference

Open Space (mean = 2.78)
Self-contained (mean = 1.92)

Building Type: No significant difference

Self-contained - Regular (mean = 2.00)
Self-contained - Special (mean = 2.25)
Combination (mean = 2.00)
Open Space (mean = 2.78)

Definition: Subscale 27, Team Teaching, was composed of one item:

E-8. Indications of "team teaching" (teachers cooperating by dividing planning and/or instruction according to teacher strengths or student needs, i.e., ability level, learning style, interests, etc.).

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.52)
Grade 5 (mean = 2.15)

Classroom Type: No significant difference

Open Space (mean = 3.71)
Self-contained (mean = 1.63)

Building Type:

The open space building (mean = 4.11) ratings of the incidence of team teaching were significantly greater than self-contained - regular (mean = 1.80), self-contained - special (mean = 1.65), and combination (mean = 2.11) buildings.

Definition: Subscale 28, Teacher Communication and Sharing, was composed of the following items:

E-9. Indications of communication between teachers regarding curriculum issues.

E-10. Indications of communication between teachers regarding student issues (needs, behaviors, etc.).

E-11. Indications of sharing of supplies and materials among teachers.

E-12. Teacher interaction with other adults.

Presentation of the Data:

Reliability of the scale: .68

Grade Level: No significant difference

Grade 3 (mean = 2.54)
Grade 5 (mean = 2.61)

Classroom Type:

Open space class areas (mean = 3.61) were rated significantly higher in the degree of teacher communication and sharing than self-contained classrooms (mean = 1.55).

Building Type:

The open space building (mean = 3.61) ratings were significantly greater than self-contained - regular (mean = 1.53), self-contained - special (mean = 1.62), and combination (mean = 1.77) buildings.

SUMMARY OF CLASSROOM OBSERVATION DATA

Dimensions on which the comparison groups showed statistically significant differences and lack of differences are summarized in narrative form for three categories: grade level, classroom type and building type. The results are also summarized in Table VIII.

TABLE VIII

STATISTICALLY SIGNIFICANT DIFFERENCES

OBSERVATION REPORTS OF

CLASSROOM STRUCTURE, CLIMATE AND ACTIVITY

n = 45

SUBSCALE LABEL	RELIABILITY OF SUBSCALE	GRADE LEVEL Grades 3 and 5	CLASS TYPE SC = self-contained OS = open space	BUILDING TYPE SC-R = Self-contained-regular SC-S = Self-contained-special OS = Open space C = Combination
1. CROWDEDNESS	.78	N.S.D.	SC> OS	N.S.D.
2. NOISE INTERFERENCE	.93	N.S.D.	OS> SC	OS> SC-R SC-S, C.
3. AVAILABILITY AND APPROPRIATENESS OF DISPLAY	.61	3> 5	N.S.D.	N.S.D.
4. ACCESS TO MEDIA CENTER	-	N.S.D.	OS> SC	OS> SC-R, SC-C, C
5. FREQUENCY OF STUDENT MOVEMENT	-	3> 5	N.S.D.	N.S.D.
6. FREQUENCY OF ADULT MOVEMENT	-	N.S.D.	N.S.D.	N.S.D.
7. EASE AND APPROPRIATENESS OF MOVEMENT	.49	3> 5	N.S.D.	N.S.D.
8. CLASS SIZE GROUPING	-	5> 3	N.S.D.	N.S.D.
9. SMALL GROUP STUDENT AND ADULT	-	3> 5	N.S.D.	N.S.D.
10. SMALL GROUP STUDENTS ALONE	-	N.S.D.	N.S.D.	N.S.D.
11. ONE TO ONE STUDENT AND ADULT	-	3> 5	N.S.D.	N.S.D.
12. INDEPENDENT STUDY	-	N.S.D.	N.S.D.	N.S.D.
13. INTELLECTUAL AND COGNITIVE ACTIVITIES	-	N.S.D.	N.S.D.	N.S.D.
14. SOCIAL ACTIVITIES	-	N.S.D.	N.S.D.	N.S.D.
15. SPECIAL ACTIVITIES	-	N.S.D.	N.S.D.	N.S.D.
16. APPLY SKILLS IN CLASS	-	N.S.D.	N.S.D.	N.S.D.
17. BUSY WORK	-	N.S.D.	N.S.D.	N.S.D.
18. ACCESS TO AND USE OF MATERIALS	.76	3> 5	N.S.D.	N.S.D.
19. INDIVIDUALIZATION OF MATERIALS AND ASSIGNMENTS	.92	3> 5	OS> SC	OS> SC-R, SC-S,C; C> SC-R; SC-S = SC-R, C
20. STUDENT INVOLVEMENT	.51	N.S.D.	N.S.D.	N.S.D.
21. LACK OF STUDENT RESPECT	.82	N.S.D.	N.S.D.	N.S.D.

SUBSCALE LABEL	RELIABILITY OF SUBSCALE	GRADE LEVEL Grades 3 and 5	CLASS TYPE SC = self-contained OS = open space	BUILDING TYPE SC-R = Self-contained-regular SC-S = Self-contained-special OS = Open space C = Combination
22. TEACHERS' ENCOURAGEMENT OF STUDENTS	-	3> 5	N.S.D.	N.S.D.
23. TEACHERS LECTURING	-	N.S.D.	N.S.D.	N.S.D.
24. TEACHERS GUIDING AND CLARIFYING	.49	N.S.D.	N.S.D.	N.S.D.
25. TEACHERS DIRECTING OR DISCOURAGING	.54	N.S.D.	N.S.D.	N.S.D.
26. DEPARTMENTALIZATION	-	N.S.D.	N.S.D.	N.S.D.
27. TEAM TEACHING	-	N.S.D.	N.S.D.	OS> SC-R, SC-S, C
28. TEACHER COMMUNICATION AND SHARING	.68	N.S.D.	OS> SC	OS> SC-R, SC-S, C

A Comparison of Observation Reports of Third and Fifth Grade Classes

The ratings of observers in third grade classes were higher than ratings of fifth grade classes in the following areas: availability and appropriateness of display materials, frequency of student movement, ease and appropriateness of movement, small groups of students meeting with one adult, one student meeting with one adult, access to and use of materials, individualization of materials and assignments, and teacher encouragement of students.

Observers reported teacher utilization of a total class grouping for instruction to be more frequent in fifth grade than third grade.

No differences were shown between third and fifth grade classrooms on the remaining nineteen dimensions of the classroom observation scale.

A Comparison of Observation Reports of Self-contained and Open Space Classrooms

The ratings of open space classrooms were higher than those of self-contained classrooms in the following areas: access to the media center, individualization of materials and assignments, noise interference, and teacher communication and sharing.

Observers reported a higher degree of crowdedness in self-contained classrooms.

No differences were shown between open space and self-contained classrooms on the remaining twenty-three subscales.

A Comparison of Observations of Classrooms Housed in Four Types of Buildings

The ratings of observers were higher for open space buildings than the other three building types on these dimensions: access to the media center, individualization of materials and assignments, noise interference, team teaching, and teacher communication and sharing.

No differences were shown among the building types on the remaining twenty-three subscales.

SECTION V
PARENT ATTITUDES

INSTRUMENT DESIGN AND DATA COLLECTION PROCEDURES

A variety of prototypes was used by the study committee in developing the parent interview form. A copy of the form is included in Appendix V.

A stratified random sample of parents of students in third and fifth grade classes at all elementary schools, with the exception of Park Primary, Gold Hill and Jamestown, was selected to participate in the survey of parent attitudes. The selected sample was composed of a proportional representation of third and fifth grade classes, open space and self-contained classes, and the four building types.

In late April, each school provided the NCEBOCS Evaluation Consultant with updated third and fifth grade class lists. The stratified random sample of students was developed from these lists. The school personnel then provided the parents' name, address and telephone number for each student selected.

The parent attitude data were collected through telephone interviews. The interviews were conducted by three experienced NCEBOCS interviewers who had no direct association with the Boulder Valley School District. Prior to the interviews, the NCEBOCS Evaluation Consultant met with the interviewers to orient them to the interview form and procedures. Interviewer assignments insured

that parents from a given school were not all contacted by the same interviewer.

During the third week in May, the Director of Elementary Education wrote a letter to the selected parents explaining the purpose of the study and requesting their cooperation with the interviewer. A copy of the letter is included in Appendix VI.

The parent interviews were conducted between May 23 and June 7. Most interviews lasted between 20 and 30 minutes. However, the time was variable depending upon the number of additional comments made by parents.

The original design designated a sample of 138 parents. A total of 126 interviews or 91% was completed. The reasons for not including 12 of the selected parents in the sample are included in Table IX. The distribution of interviewed parents in relation to the categories of grade level, classroom type and building type is presented in Table X.

RESULTS

In this section, data related to each item on the parent interview form are presented. Parent responses to the questions were given the following numerical values: 1 = no, 2 = undecided, not sure mixed feelings and 3 = yes.

TABLE IX

REASONS FOR NOT INCLUDING

SELECTED PARENTS IN THE SAMPLE

NUMBER	GRADE LEVEL	CLASS TYPE	BUILDING TYPE	REASON
2	-	-	-	The coding information on the interview form was inadequate for classification
1	5	SC	SC-R	Parent refused
1	5	SC	SC-R	Parent unavailable (20 calls)
1	5	SC	SC-R	Parent unavailable (business answering service)
3	5	OS	C	Phone disconnected; parents moved
1	5	OS	OS	Parent was teacher at school
1	3	OS	OS	Parent was teacher at school
2	3	SC	SC-S	Parent was unavailable

TABLE X

DISTRIBUTION OF STUDENTS IN DISTRICT AND INTERVIEW SAMPLE*

Building Type Categories	DISTRICT 3rd Grade	DISTRICT 5th Grade	Classroom Type	SAMPLE 3rd Grade	SAMPLE 5th Grade
SC-R	526	618	SC	21	23
SC-S	358	241	SC	14	10
C	156	98	SC	7	4
C	165	235	OS	7	8
OS	368	405	OS	15	17
	1,573	1,597	Totals	64	62

SUMMARY BY CLASSROOM TYPE

1,040	957		Self-contained	42	37
533	640		Open Space	22	25

* Total Number of Third and Fifth Grade Students in District = 3170

Total Number of Parents Interviewed = 126; Therefore, 4% of the students were represented by one parent interview.

Label: Home and School Communication

Item: 1. Do you feel that there is good communication between home and school?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.64)
Grade 5 (mean = 2.65)

Classroom Type: No significant difference

Open space (mean = 2.75)
Self-contained (mean = 2.58)

Building Type: No significant difference

Self-contained - Regular (mean = 2.58)
Self-contained - Special (mean = 2.64)
Combination (mean = 2.63)
Open Space (mean = 2.76)

Label: Satisfaction with Reporting System

Item: 2. Are you satisfied with the type of grading and reporting system used at your child's school?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.55)
Grade 5 (mean = 2.58)

Classroom Type:

Parents with a child in a self-contained classroom (mean = 2.68) were significantly more satisfied with the reporting system than parents with a child in an open space classroom (mean = 2.35).

Building Type: No significant difference

Self-contained - Regular (mean = 2.63)
Self-contained - Special (mean = 2.86)
Combination (mean = 2.46)
Open Space (mean = 2.45)

Label: Informed About Child's Progress

Item: 3. Have you been kept well informed about your child's progress during this school year?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.81)
Grade 5 (mean = 2.70)

Classroom Type: No significant difference

Open Space (mean = 2.78)
Self-contained (mean = 2.73)

Building Type: No significant difference

Self-contained - Regular (mean = 2.75)
Self-contained - Special (mean = 2.82)
Combination (mean = 2.66)
Open space (mean = 2.81)

Label: Child Likes School

Item: 4. Do you feel that your child is happy with his/her school situation? Does he/she like school?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.71)
Grade 5 (mean = 2.85)

Classroom Type: No significant difference

Open space (mean = 2.89)
Self-contained (mean = 2.67)

Building Type: No significant difference

Self-contained - Regular (mean = 2.73)
Self-contained - Special (mean = 2.65)
Combination (mean = 2.75)
Open Space (mean = 2.85)

Label: Child Likes Academics

Item: 5. Does he/she like academic subjects (reading, math, language, writing, science)?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.75)
Grade 5 (mean = 2.64)

Classroom Type: No significant difference

Open Space (mean = 2.68)
Self-contained (mean = 2.67)

Building Type: No significant difference

Self-contained - Regular (mean = 2.83)
Self-contained - Special (mean = 2.38)
Combination (mean = 2.67)
Open Space (mean = 2.71)

Label: Child Likes Special Subjects

Item: 6. Does he/she like special subjects (music, P.E. and art)?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.84)
Grade 5 (mean = 2.86)

Classroom Type: No significant difference

Open Space (mean = 2.89)
Self-contained (mean = 2.80)

Building Type:

Parents with a child in self-contained - regular (mean = 2.94) or open space (mean = 2.92) buildings reported significantly more positive child attitudes toward special subjects than the parents with a child in self-contained - special (mean = 2.77) or combination (mean = 2.60) buildings.

Label: Child Likes Extracurricular Activities

Item: 7. Does he/she like extracurricular activities (crafts, electives, special projects)?

Presentation of the Data:

Grade Level: No significant difference

Grade 3	(mean = 2.67)
Self-contained	(mean = 2.71)

Classroom Type: No significant difference

Open Space	(mean = 2.81)
Self-contained	(mean = 2.63)

Building Type: No significant difference

Self-contained - Regular	(mean = 2.71)
Self-contained - Special	(mean = 2.60)
Combination	(mean = 2.50)
Open Space	(mean = 2.81)

Label: Child Likes Other Children

Item: 8. Does he/she like interaction with other students?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.85)
Grade 5 (mean = 2.78)

Classroom Type: No significant difference

Open Space (mean = 2.76)
Self-contained (mean = 2.83)

Building Type: No significant difference

Self-contained - Regular (mean = 2.80)
Self-contained - Special (mean = 2.86)
Combination (mean = 2.82)
Open Space (mean = 2.77)

Label: Child Likes Teachers

Item: 9. Does he/she like interaction with teachers?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.75)
Grade 5 (mean = 2.76)

Classroom Type:

The ratings of parents with a child in an open space class area (mean = 2.95) were significantly higher than the ratings of parents with a child in a self-contained classroom (mean = 2.66).

Building Type:

The ratings of parents with a child in open space (mean = 2.94) and self-contained - regular (mean = 2.83) buildings were significantly higher than the ratings of parents with a child in combination (mean = 2.65) and self-contained - special (mean = 2.55) buildings.

Label: Satisfactory Emphasis on 3 R's

Item: 10. Is there enough emphasis on the "3 R's" in your child's school?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.60)
Grade 5 (mean = 2.61)

Classroom Type: No significant difference

Open Space (mean = 2.53)
Self-contained (mean = 2.61)

Building Type: No significant difference

Self-contained - Regular (mean = 2.70)
Self-contained - Special (mean = 2.62)
Combination (mean = 2.37)
Open Space (mean = 2.59)

Label: Child Receives Instructional Help

Item: 11. Is your child receiving the help he or she needs at school? Is instruction provided to meet his/her educational needs (rate, level, special help, etc.)?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.67)
Grade 5 (mean = 2.65)

Classroom Type: No significant difference

Open Space (mean = 2.55)
Self-contained (mean = 2.72)

Building Type: No significant difference

Self-contained - Regular (mean = 2.80)
Self-contained - Special (mean = 2.76)
Combination (mean = 2.53)
Open Space (mean = 2.51)

Label: Teachers Should Be More Strict

Item: 12. Do you feel that teachers at your child's school should be more strict with the children?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 1.56)
Grade 5 (mean = 1.80)

Classroom Type: No significant difference

Open Space (mean = 1.65)
Self-contained (mean = 1.69)

Building Type: No significant difference

Self-contained - Regular (mean = 1.69)
Self-contained - Special (mean = 1.35)
Combination (mean = 1.79)
Open Space (mean = 1.62)

Label: Program Provides Direction

Item: 13. Does the learning program provide enough direction and structure for your child?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.81)
Grade 5 (mean = 2.71)

Classroom Type: No significant difference

Open Space (mean = 2.77)
Self-contained (mean = 2.73)

Building Type: No significant difference

Self-contained - Regular (mean = 2.71)
Self-contained - Special (mean = 2.82)
Combination (mean = 2.75)
Open Space (mean = 2.63)

Label: Class Atmosphere Allows Work

Item: 14. Does the classroom (or area) atmosphere allow your child to do his/her work ?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.32)
Grade 5 (mean = 2.53)

Classroom Type:

The ratings of parents with a child in a self-contained classroom (mean = 2.72) were significantly higher than the ratings of parents with a child in an open space class area (mean = 2.22).

Building Type:

The ratings of parents with a child in self-contained - special (mean = 2.78) and self-contained - regular (mean 2.70) buildings were significantly higher than the ratings of parents with a child in an open space building (mean = 2.19). However, the ratings of parents with a child in a combination building (mean = 2.52) were not significantly different from the ratings of other parents.

Label: Adequate Discipline

Item: 15. Is there adequate discipline/direction/classroom control at your child's school?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.64)
Grade 5 (mean = 2.65)

Classroom Type: No significant difference

Open Space (mean = 2.64)
Self-contained (mean = 2.64)

Building Type: No significant difference

Self-contained - Regular (mean = 2.56)
Self-contained - Special (mean = 2.91)
Combination (mean = 2.42)
Open Space (mean = 2.74)

Label: Library Program Supports Educational Program

Item: 16. Do you feel that the school library program facilitates the educational program for your child?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.71)
Grade 5 (mean = 2.67)

Classroom Type:

The ratings of parents with a child in an open space class area (mean = 2.79) were significantly higher than the ratings of parents with a child in a self-contained classroom (mean = 2.53).

Building Type:

The ratings of parents with a child in open space (mean = 2.81), self-contained - regular (mean = 2.74) and combination (mean = 2.62) buildings were significantly higher than the ratings of parents with a child in self-contained - special (mean = 2.15) buildings.

Label: Satisfactory Progress in Reading

Item: 17. Is your child showing satisfactory progress in reading?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.71)
Grade 5 (mean = 2.71)

Classroom Type: No significant difference

Open Space (mean = 2.68)
Self-contained (mean = 2.70)

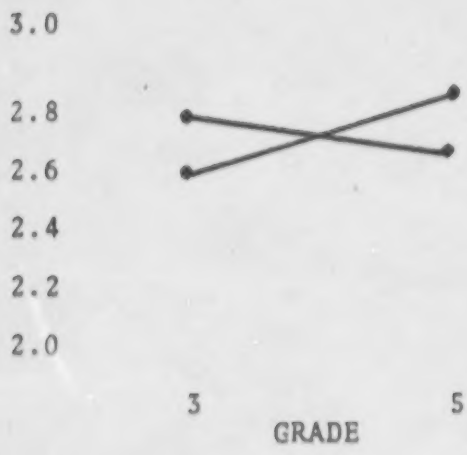
Significant Interaction of Grade Level and Classroom Type:

Parents with a child in a third grade open space classroom (mean = 2.81) were more positive than parents with a child in a third grade self-contained classroom (mean = 2.63).

Parents with a child in a fifth grade self-contained classroom (mean = 2.87) were more positive than the

parents with a child in a fifth grade open space classroom (mean = 2.56).

The reversal across the dimensions of grade level and classroom type was significant.



Building Type: No significant difference

Self-contained - Regular	(mean = 2.87)
Self-contained - Special	(mean = 2.42)
Combination	(mean = 2.70)
Open Space	(mean = 2.75)

Label: Satisfactory Progress in Math

Item: 18. Is your child showing satisfactory progress in math?

Presentation of the Data:

Grade Level: No significant difference

Grade 3	(mean = 2.75)
Grade 5	(mean = 2.76)

Classroom Type: No significant difference

Open Space	(mean = 2.82)
Self-contained	(mean = 2.61)

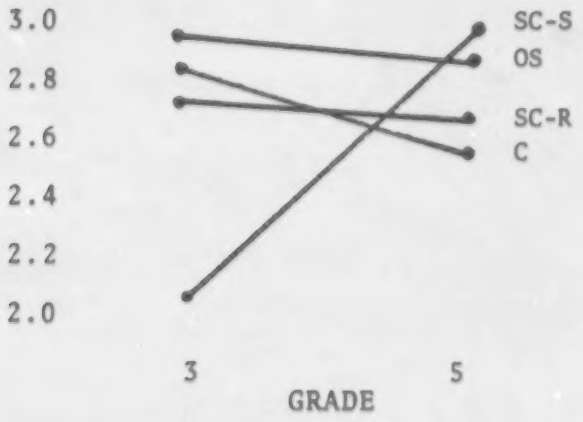
Building Type: No significant difference

Self-contained - Regular	(mean = 2.71)
Self-contained - Special	(mean = 2.43)
Combination	(mean = 2.70)
Open Space	(mean = 2.90)

Significant Interaction: The pattern of parent responses is consistent across grade levels and building types with the exception of parents with a child in a third grade classroom in the self-contained - special buildings. The ratings of these parents were significantly lower.

Report of Cell Means
Building Type

		SC-R	SC-S	C	OS
Grade Level	3	2.73	2.13	2.83	2.92
	5	2.70	2.91	2.58	2.88



Label: Satisfactory Progress in Language Skills

Item: 19. Is your child showing satisfactory progress in language skills (writing, spelling, grammar, etc.)?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.65)
Grade 5 (mean = 2.62)

Classroom Type: No significant difference

Open Space (mean = 2.70)
Self-contained (mean = 2.58)

Building Type: No significant difference

Self-contained - Regular (mean = 2.76)
Self-contained - Special (mean = 2.25)
Combination (mean = 2.62)
Open Space (mean = 2.68)

Label: Satisfactory Progress in Science

Item: 20. Is your child showing satisfactory progress in science?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.80)
Grade 5 (mean = 2.86)

Classroom Type: No significant difference

Open Space (mean = 2.87)
Self-contained (mean = 2.79)

Building Type: No significant difference

Self-contained - Regular (mean = 2.82)
Self-contained - Special (mean = 2.84)
Combination (mean = 2.76)
Open Space (mean = 2.87)

Label: Satisfactory Progress in Social Development

Item: 21. Is your child showing satisfactory progress in working and playing with other children?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.87)
Grade 5 (mean = 2.97)

Classroom Type: No significant difference

Open Space (mean = 2.93)
Self-contained (mean = 2.90)

Building Type: No significant difference

Self-contained - Regular (mean = 2.90)
Self-contained - Special (mean = 2.95)
Combination (mean = 2.92)
Open Space (mean = 2.85)

Label: Positive Self Concept

Item: 22. Is your child developing a positive view of himself/herself?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.85)
Grade 5 (mean = 2.91)

Classroom Type: No significant difference

Open Space (mean = 2.93)
Self-contained (mean = 2.80)

Building Type: No significant difference

Self-contained - Regular (mean = 2.85)
Self-contained - Special (mean = 2.77)
Combination (mean = 2.81)
Open Space (mean = 2.94)

Label: Developing responsibility

Item: 23. Is your child developing independence and responsibility?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.68)
Grade 5 (mean = 2.72)

Classroom Type: No significant difference

Open Space (mean = 2.75)
Self-contained (mean = 2.61)

Building Type: No significant difference

Self-contained - Regular (mean = 2.57)
Self-contained - Special (mean = 2.69)
Combination (mean = 2.72)
Open Space (mean = 2.84)

Label: Friendly and Understanding Teachers

Item: 24. Are teachers at your child's school friendly and understanding?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.85)
Grade 5 (mean = 2.93)

Classroom Type:

Ratings of parents with a child in an open space class area (mean = 2.98) were significantly higher than the ratings of parents with a child in a self-contained classroom (mean = 2.82).

Building Type: No significant difference

Self-contained - Regular (mean = 2.85)
Self-contained - Special (mean = 2.90)
Combination (mean = 2.77)
Open Space (mean = 2.98)

Label: Multiple Teachers for Academics

Item: 25. Does your child have more than one teacher for academic instruction (not considering music, P.E., and Art)? (If "no", do not ask the following question.)

Presentation of the Data: (yes = 3, no = 1)

Grade Level:

The ratings of parents of fifth graders (mean = 2.50) were significantly higher than the ratings of parents of third graders (mean = 2.14).

Classroom Type:

The ratings of parents with a child in an open space class area (mean = 2.75) were significantly higher than the ratings of parents with a child in a self-contained classroom (mean = 1.81).

Building Type:

The ratings of parents with a child in an open space building (mean = 2.80) were significantly higher than the ratings of parents with a child in a combination

(mean = 2.27) and self-contained - regular (mean = 2.00) buildings which were significantly higher than the ratings of parents with a child in a self-contained - special (mean = 1.69) building.

Label: Multiple Teacher Advantage

Item: 26. Was it advantageous for your child to have more than one teacher during this year?

Presentation of the Data: (n = 64)

Grade Level: No significant difference

Grade 3 (mean = 2.82)
Grade 5 (mean = 2.86)

Classroom Type: No significant difference

Open Space (mean = 2.85)
Self-contained (mean = 2.84)

Building Type: No significant difference

Self-contained - Regular (mean = 2.82)
Self-contained - Special (mean = 2.99)
Combination (mean = 2.60)
Open Space (mean = 2.96)

Label: Satisfaction with Teachers' Ability

Item: 27. Do you feel your child's teacher(s) is (are) doing a good job?

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.89)
Grade 5 (mean = 2.84)

Classroom Type: No significant difference

Open Space (mean = 2.89)
Self-contained (mean = 2.83)

Building Type: No significant difference

Self-contained - Regular (mean = 2.86)
Self-contained - Special (mean = 2.81)
Combination (mean = 2.88)
Open Space (mean = 2.88)

Label: Community Support of School

Item: 28. Do you feel that the local community (i.e., your attendance area) supports the school (is in favor of the manner in which the school operates)?

Presentation of the Data: (yes = 3, no = 1)

Grade Level: No significant difference

Grade 3 (mean = 2.53)
Grade 5 (mean = 2.67)

Classroom Type: No significant difference

Open Space (mean = 2.72)
Self-contained (mean = 2.50)

Building Type:

The ratings of parents with a child in open space (mean = 2.88) or self-contained - regular (mean = 2.73) buildings were significantly higher than the ratings of parents with a child in self-contained - special (mean = 2.29) or combination (mean = 2.22) buildings.

Label: School Visitation

Item: 29. Have you visited/observed your child's class while it was in session? (If "no", do not ask the following question.)

Presentation of the Data:

Grade Level: No significant difference

Grade 3 (mean = 2.04)
Grade 5 (mean = 2.07)

Classroom Type:

The ratings of parents with a child in an open space class area (mean = 2.20) were significantly higher than the ratings of parents with a child in a self-contained classroom (mean = 1.80).

Building Type:

The ratings of parents with a child in an open space building (mean = 2.43) were significantly higher than the ratings of parents with a child in a self-contained - regular building (mean = 1.64). However, the ratings of parents with children in self-contained - special (mean = 2.17) and combination

(mean = 2.04) buildings were not significantly different from the ratings of parents with a child in open space or self-contained - regular buildings.

Label: Liked School Visitation

Item: 30. Did you like what you observed?

Presentation of the Data: (n = 56)

Grade Level: No significant difference

Grade 3 (mean = 2.75)
Grade 5 (mean = 2.83)

Classroom Type: No significant difference

Open Space (mean = 2.73)
Self-contained (mean = 2.86)

Building Type: No significant difference

Self-contained - Regular (mean = 2.99)
Self-contained - Special (mean = 2.70)
Combination (mean = 2.76)
Open Space (mean = 2.77)

Label: Overall Satisfaction With School

Item: 31. How would you describe your overall level of satisfaction with the quality of your child's school?

Presentation of the Data: (5 = very satisfied, 1 = very dissatisfied)

Grade Level: No significant difference

Grade 3 (mean = 4.24)
Grade 5 (mean = 4.26)

Classroom Type: No significant difference

Open Space (mean = 4.25)
Self-contained (mean = 4.24)

Building Type: No significant difference

Self-contained - Regular (mean = 4.39)
Self-contained - Special (mean = 4.17)
Combination (mean = 3.90)
Open Space (mean = 4.37)

TABLE XI

STATISTICALLY SIGNIFICANT DIFFERENCES

PARENT ATTITUDES

ITEM LABEL	GRADE LEVEL Grades 3 & 5	CLASS TYPE SC = self-contained OS = open space	BUILDING TYPE SC-R = Self-contained-regular SC-S = Self-contained-special OS = Open space C = Combination
	No significant difference		
1. HOME AND SCHOOL COMMUNICATION	N.S.D.	N.S.D.	N.S.D.
2. SATISFACTION WITH REPORTING SYSTEM	N.S.D.	SC> OS	N.S.D.
3. INFORMED ABOUT CHILD'S PROGRESS	N.S.D.	N.S.D.	N.S.D.
4. CHILD LIKES SCHOOL	N.S.D.	N.S.D.	N.S.D.
5. CHILD LIKES ACADEMICS	N.S.D.	N.S.D.	N.S.D.
6. CHILD LIKES SPECIAL SUBJECTS	N.S.D.	N.S.D.	SC-R, OS> SC-S, Comb.
7. CHILD LIKES EXTRACURRICULAR ACTIVITIES	N.S.D.	N.S.D.	N.S.D.
8. CHILD LIKES OTHER CHILDREN	N.S.D.	N.S.D.	N.S.D.
9. CHILD LIKES TEACHERS	N.S.D.	OS> SC	SC-R, OS> SC-S, Comb.
10. SATISFACTORY EMPHASIS ON 3 R's	N.S.D.	N.S.D.	N.S.D.
11. CHILD RECEIVES INSTRUCTIONAL HELP	N.S.D.	N.S.D.	N.S.D.
12. TEACHERS SHOULD BE MORE STRICT	N.S.D.	N.S.D.	N.S.D.
13. PROGRAM PROVIDES DIRECTION	N.S.D.	N.S.D.	N.S.D.
14. CLASS ATMOSPHERE ALLOWS WORK	N.S.D.	SC> OS	SC-R, SC-S> OS; Comb.: N.S.D.
15. ADEQUATE DISCIPLINE	N.S.D.	N.S.D.	N.S.D.
16. LIBRARY PROGRAM SUPPORTS EDUCATIONAL PROGRAM	N.S.D.	OS> SC	SC-R, Comb., OS> SC-S
17. SATISFACTORY PROGRESS IN READING	N.S.D.	N.S.D. *	N.S.D.
18. SATISFACTORY PROGRESS IN MATH	N.S.D.	N.S.D.	N.S.D. **
19. SATISFACTORY PROGRESS IN LANGUAGE SKILLS	N.S.D.	N.S.D.	N.S.D.
20. SATISFACTORY PROGRESS IN SCIENCE	N.S.D.	N.S.D.	N.S.D.
21. SATISFACTORY PROGRESS IN SOCIAL DEVELOPMENT	N.S.D.	N.S.D.	N.S.D.
22. POSITIVE SELF-CONCEPT	N.S.D.	N.S.D.	N.S.D.
23. DEVELOPING RESPONSIBILITY	N.S.D.	N.S.D.	N.S.D.
24. FRIENDLY AND UNDERSTANDING TEACHERS	N.S.D.	OS > SC	N.S.D.
25. MULTIPLE TEACHERS FOR ACADEMICS	5 > 3	OS> SC	OS> SC-R, C> SC-S
26. MULTIPLE TEACHER ADVANTAGE	N.S.D.	N.S.D.	N.S.D.
27. SATISFACTION WITH TEACHER'S ABILITY	N.S.D.	N.S.D.	N.S.D.
28. COMMUNITY SUPPORT OF SCHOOL	N.S.D.	N.S.D.	SC-R, OS> SC-S, Comb.
29. SCHOOL VISITATION	N.S.D.	OS> SC	OS> SC-R; SC-S, Comb.: N.S.D.
30. LIKED SCHOOL VISITATION	N.S.D.	N.S.D.	N.S.D.
31. OVERALL SATISFACTION WITH SCHOOL	N.S.D.	N.S.D.	N.S.D.

* Significant interaction of grade levels across class type
** Significant interaction of grade levels across building type

SUMMARY OF PARENT ATTITUDE DATA

Dimensions on which the comparison groups showed statistically significant differences and lack of differences are summarized in narrative form for three categories: grade level, classroom type and building type. The results are also summarized in Table XI.

A Comparison of Ratings by Parents of Third and Fifth Grade Students

Parents of fifth graders reported a significantly higher incidence of the child having more than one teacher for the academic subjects than parents of third graders.

There were no differences between the ratings by parents of third and fifth graders on the remaining 30 items.

A Comparison of Ratings by Parents with a Child in Open or Self-Contained Classes

The ratings of parents with a child in a self-contained classroom were higher than those of parents with a child in an open space area on two items: 1) satisfaction with the grading and reporting system and 2) the classroom atmosphere allows the child to do the classwork.

The ratings by parents with a child in an open space class area were significantly higher than the ratings by the parents with a child in a self-contained classroom on five items: 1) the child likes interacting with the teachers, 2) the school library program facilitates the educational program of the child, 3) the teachers

are friendly and understanding, 4) the child has more than one teacher for academic instruction and 5) the parent has observed the child's class while the class was in session.

There were no differences between the ratings by parents with a child in self-contained classrooms and the parents with a child in an open space class area on the remaining 24 items.

Interaction of Grade Levels Across Classroom Types

Parents with third grade children in open space class areas were more positive about their child's progress in reading than the parents with children in third grade self-contained classrooms. The reverse was true for the parents of fifth graders. The differences within the grade levels were not statistically significant; however, the opposite trends of the two grades within classroom type were significant.

A Comparison of Ratings by Parents According to Building Type

The ratings of parents with a child in a self-contained - regular building or an open space building were significantly higher than the ratings of parents with a child in a self-contained - special building or a combination building on three items: 1) the child likes the special subjects, i.e., music, physical education and art; 2) the child likes interacting with the teachers and 3) the local community supports the school.

The ratings of parents with a child in a self-contained - regular building or self-contained - special building were significantly higher than the ratings of parents with a child in an open space

building on one item: the classroom atmosphere allows the child to do the classwork. However, the ratings of parents with a child in a combination building were not significantly different from the ratings of other parents.

The ratings of parents representing three building types, self-contained - regular, open space, and combination were higher than the ratings of parents representing self-contained - special buildings on one item: the school library program facilitates the educational program of the child.

The ratings of parents with a child in an open space building were higher than the ratings of parents with a child in a self-contained - regular building or a combination building on one item: the child has more than one teacher for academic subjects. Also, the ratings of parents representing these three building types were significantly higher than the ratings of parents representing self-contained - special buildings.

Parents representing the open space buildings reported a higher incidence of visiting their child's class than the parents representing self-contained - regular buildings. However, there were no differences between the parents representing self-contained - special or combination buildings and the parents representing self-contained - regular and open space buildings.

No differences were shown among the building types on the remaining 24 items.

Interaction of Grade Levels Across Building Types

The parents of third graders were consistently higher than the parents of fifth graders in rating their child's math program as satisfactory with the exception of those parents of third grade students attending a self-contained - special school. The differences between the grade levels were not significant; however, the reverse trend of the two grades within self-contained - special buildings was significant.

SECTION VI
ACADEMIC ACHIEVEMENT

The question posed in this section is: What differences exist, if any, between the district fifth grade open space and self-contained classrooms in the academic achievement of students as measured by the Science Research Associates Achievement Test?

DESIGN

The SRA Achievement Tests are administered in grades 4, 5 and 6. Scholastic aptitude tests are administered in grades three and five. Due to the desirability of assessing achievement after controlling for academic potential or scholastic aptitude, the study was limited to the fifth grade level.

In many evaluation studies, the unit for analysis is the individual student. The purpose of this study was to determine if differences in academic achievement exist between students in open space and self-contained classrooms. For this reason, the classroom group was chosen as the logical unit for analysis.

All of the district fifth grade elementary classrooms, twenty-three open space and forty-four self-contained, were included in the study. Middle school fifth grade classrooms were not a part of the study due to the inappropriateness of designating these classrooms as open space or self-contained.

The dependent variables are the average fifth grade classroom scores on the reading, language arts and mathematics sections of the SRA

Achievement Test administered in October of 1973. The independent variable is the classification of open space or self-contained classrooms.

Students and teachers are not randomly assigned to either open space or self-contained classrooms. For this reason, the evaluator cannot assume that students and teachers within the two classifications of classroom are equivalent.

One statistical method of partially equating the students within the two classroom classifications is to covary on those variables which logically relate to achievement. For example, if the mean scholastic aptitude test scores for two classroom units were quite disparate, achievement would be expected to differ accordingly. By using the variable of scholastic aptitude as a covariate, the following question can be addressed: If the intelligence level were equal for both groups of classrooms, would there be any difference in academic achievement?

The variables anticipated as covariates in the study included the students' scholastic aptitude, the teachers' years of teaching experience, and the space utilization or degree of crowding in the classroom. The space utilization factor was based upon the ratio of the number of students enrolled in the school as compared to the number of students the school was designed to accommodate.

RESULTS

The means for each of the covariates are given in Table XII.

TABLE XII

COVARIATE MEANS FOR OPEN SPACE AND TRADITIONAL CLASSROOMS

	PMA SCORE	SPACE UTILIZATION	TOTAL TEACHING EXP
OPEN SPACE	107	91%	4.9 years
SELF-CONTAINED	109	78%	11.5 years

When each of the potential covariates was examined in regard to achievement, only the PMA scores were related to achievement. Even though there were great mean differences between open space and self-contained classrooms in space utilization and total teaching experience, these variables did not correlate statistically with student achievement. Therefore, these variables were not functional as covariates. For this reason, only the PMA scores were used as a covariate.

TABLE XIII

ADJUSTED MEANS OF SRA RAW SCORES

	READING	LANGUAGE ARTS	MATHEMATICS
OPEN SPACE	56	63	41
TRADITIONAL	55	64	43

SUMMARY

The analysis of covariance indicated that the differences between the means for each group across all dependent variables is no more than would be expected by chance. That is, after correcting for

differences in scholastic aptitude, the academic achievement of students, as measured by the SRA Achievement Test Series, in open space and self-contained classrooms in reading, language arts, and mathematics was equivalent.

SECTION VII

SUMMARY, IMPLICATIONS AND RECOMMEDATION

In Section II through Section VI the data were presented and summarized according to data source: teachers, students, classroom observations, parents and achievement test scores. In this section, the data are summarized according to general topics: role of the teacher, school atmosphere, student personal and social development, student academic development, school and community relations and communication, and building design and facilities. A summary in chart form is presented in Table XIV.

Class type and building type differences are discussed within each general topic. A summary of data related to grade level differences is presented first as a separate topic.

The sections entitled "Implications" include questions which occurred to the evaluator. The enumeration of questions is not intended to be all inclusive, but rather to be a stimulus for the development of further questions. The purpose of posing the questions is to provoke discussion among members of the school district community to acknowledge the strengths and to identify areas for improvement in the total district educational program.

TABLE XIV

STATISTICALLY SIGNIFICANT DIFFERENCES BY TOPIC

TOPIC	SOURCE OF DATA					SIGNIFICANT DIFFERENCES												
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests	Grade Level Differences			N.S.D. Class Type or Building Type	Class Type Differences			Building Type Differences						Educational Significance--- Student Data GL = Grade Level CT = Class Type BT = Building Type
						N.S.D.	Difference Favors Grade 3	Difference Favors Grade 5		N.S.D.	Difference Favors SC > OS	Difference Favors OS > SC	N.S.D.	Difference Favors SC-R	SC-S	C	OS	Descriptions of Differences	
ROLE OF THE TEACHER																			
Class Activities																			
Intellectual & Cognitive			X			X			X										
Social			X			X			X										
Special			X			X			X										
Application of skills			X			X			X										
Busy work			X			X			X										
Student & Adult Movement in the Classroom																			
Frequency of student movement			X				X		X										
Frequency of adult movement			X			X			X										
Ease & Appropriateness of movement			X				X		X										
Size of Student Groups for Instruction																			
Class size groupings			X					X	X										
Small group with an adult			X				X		X										
Small group alone			X			X			X										
1 to 1, Student & Adult			X				X		X										
Independent study			X			X			X										
Instructional Strategies of Teachers																			
Encouraging students			X				X		X										
Lecturing			X			X			X										

TOPIC	SOURCE OF DATA						SIGNIFICANT DIFFERENCES													
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests		Grade Level Differences			N.S.D. Class Type or Building Type	Class Type Differences			Building Type Differences					Descriptions of Differences	Educational Significance-- Student Data GL = Grade Level CT = Class Type BT = Building Type
							N.S.D.	Difference Favors: Grade 3	Difference Favors: Grade 5		N.S.D.	Difference Favors: SC > OS	Difference Favors: OS > SC	N.S.D.	Difference Favors: SC-R	Difference Favors: SC-S	Difference Favors: C	Difference Favors: OS		
Guiding or clarifying			X				X			X										
Directing or discouraging			X				X			X										
Use of Instructional Materials																				
Availability and Appropriateness of Display Materials			X					X		X										
Access to & use of materials			X					X		X										
Teacher individualization of materials & assignments				X				X												
Child Receives Individualized Instructional Help			X				X			X			X				X	OS>SC-R, SC-S,C; C>SC-R; SC-S=SC-R,C	
Multiple Teachers for Academics																				
Incidence of multiple teachers				X					X				X				X	OS>SC-R, C>SC-S		
Departmentalization			X				X			X										
Team Teaching			X				X				X						X	OS>SC-R, SC-S, C		
Student Preference for One Teacher		X						X*				X*			X*	X*	X*		SC-R, SC-S, C>OS	GL=questionable* CT= high; BT= high
Teacher Communication																				
Effectiveness of Comm. Among Teachers	X						X			X										
Teacher Communication and Sharing			X				X						X				X	OS>SC-R, SC-S, C		

* See Educational Significance Column

TOPIC	SOURCE OF DATA					SIGNIFICANT DIFFERENCES													
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests	Grade Level Differences N.S.D.	Grade Level Differences Difference Favors: Grade 3	Grade Level Differences Difference Favors: Grade 5	N.S.D. Class Type or Building Type	Class Type Differences N.S.D.	Class Type Differences Difference Favors: SC > OS	Class Type Differences Difference Favors: OS > SC	Building Type Differences N.S.D.	Building Type Differences Difference Favors: SC-R	Building Type Differences Difference Favors: SC-S	Building Type Differences Difference Favors: C	Building Type Differences Difference Favors: OS	Descriptions of Differences	Educational Significance--Student Data CL = Grade Level CT = Class Type BT = Building Type
Teacher Involvement in School Planning and Evaluation	X					X						X					X	OS> SC-R, SC-S,C	
Teacher Job Satisfaction	X						Primary X		X										
SCHOOL ATMOSPHERE																			
Friendly, Likeable School and Teachers																			
General School Atmosphere		X					X*					X*					X*	OS> SC-R, SC-S, C	CL = questionable CT = questionable BT = moderate
Child Likes School				X		X			X										
Adequacy of Teacher's Ability				X		X			X										
Friendly & Understanding Teachers				X		X						X	X						
Child Likes Teacher				X		X						X		X			X	SC-R, OS> SC-S, C	
Parent Perceptions of Childrens' Attitude Toward School																			
Child Likes Academics				X		X			X										
Child Likes Extracurricular Activities				X		X			X										
Child Likes Special Subjects				X		X				X				X			X	SC-R, OS>SC-S,C	

*See Educational Significance Column

TOPIC	SOURCE OF DATA						SIGNIFICANT DIFFERENCES											
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests		Grade Level Differences				Class Type Differences				Building Type Differences						
							N.S.D.	Difference Favors		N.S.D. Class Type or Building Type	N.S.D.	Difference Favors		N.S.D.	Difference Favors				Descriptions of Differences	Educational Significance-- Student Data GL = Grade Level CT = Class Type BT = Building Type
								Grade 3	Grade 5			SC > OS	OS > SC		SC-R	SC-S	C	OS		
STUDENT PERSONAL AND SOCIAL DEVELOPMENT																				
Discipline																				
Student Involvement			X				X			X										
Student Respect			X				X			X										
Adequacy of Discipline				X			X			X										
Teachers Should Be More Strict				X			X			X										
Student Independence and Responsibility																				
Developing Responsibility				X			X			X										
Self Independence and Reliability		X						X*		X										GL = questionable
Student Self Concept and Social Development																				
Child Likes Other Children				X			X			X										
Positive Self Concept				X			X			X										
Satisfactory Progress in Social Development				X			X			X										
Opportunities for Interaction With Others		X						X*					X*					X*	OS> SC-S,C, SC-R	GL = moderate CT = high; BT = high
Self with Others		X					X						X*		X*			X*	OS, SC-R> C, SC-S	CT = questionable BT = questionable
Acquaintance with Others		X							X*		X					X*		X*	OS,SC-S> SC-R,C	GL = questionable BT = high

*See the Educational Significance Column

TOPIC	SOURCE OF DATA					SIGNIFICANT DIFFERENCES												
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests	Grade Level Differences			N.S.D. Class Type or Building Type	Class Type Differences			Building Type Differences						Descriptions of Differences	Educational Significance-- Student Data CL = Grade Level CT = Class Type BT = Building Type
						N.S.D.	Difference Favors Grade 3	Difference Favors Grade 5		N.S.D.	Difference Favors SC > OS	Difference Favors OS > SC	N.S.D.	Difference Favors SC-R	Difference Favors SC-S	Difference Favors C	Difference Favors OS		
STUDENT ACADEMIC DEVELOPMENT																		
Student Application of Learning		X	X			X			X									
Reading																		
Satisfactory Progress in Reading				X		X			X[5]									
Student Perception of Reading		X					X[*]					X[*3]					X[*]	OS> SC-R, SC-S, C	GL=questionable BT=Mod. CT=questionable
Math																		
Satisfactory Progress in Math				X		X			X[6]									
Student Perception of Math		X				X			X[4]									
Parent Satisfaction with Child's Academic Progress																		
Program Provides Direction and Structure				X		X			X									
Satisfactory Emphasis on 3 R's				X		X			X									
Satisfactory Progress in Language Skills				X		X			X									
Satisfactory Progress in Science				X		X			X									
Academic Achievement																		
Reading					X	-	-	-[1]		X			-	-	-	-	2	
Language Arts					X	-	-	-		X			-	-	-	-	-	
Mathematics					X	-	-	-		X			-	-	-	-	-	

*See the Educational Significance Column
[1]Grade Three was not included in the analysis
[2]Building Type was not included in the classification system
[3]Grade Level X Class Type Interaction; Educational Significance-High; see Section III Summary
[4]Grade Level X Class Type Interaction; Educational Significance-questionable; see Section III Summary
[5]Grade Level X Class Type Interaction; See Section V Summary
[6]Grade Level X Building Type Interaction; see Section V Summary

TOPIC	SOURCE OF DATA						SIGNIFICANT DIFFERENCES													
							Grade Level Differences				Class Type Differences				Building Type Differences							
								Difference Favors				Difference Favors				Difference Favors						
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests		N.S.D.	Grade 3	Grade 5	N.S.D. Class Type or Building Type	N.S.D.	SC > OS	OS > SC	N.Y.D.	SC-R	SC-S	C	OS	Descriptions of Differences	Educational Significance-- Student Data CL = Grade Level CT = Class Type BT = Building Type
SCHOOL AND COMMUNITY RELATIONS AND COMMUNICATION																				
Parent Satisfaction with Reporting System																				
Informed about child's Progress				X			X			X										
Satisfaction with Reporting System				X			X					X		X						
Parent Perceptions of School and Community Relations																				
Home and School Communication				X			X			X										
Overall satisfaction with School				X			X			X										
School Visitation				X			X						X					X	OS > SC-S; SC-S, C: N.S.D.	
Community Support of School				X			X				X				X			X	SC-R, OS > SC-S, C	
BUILDING DESIGN & FACILITIES																				
Adequacy of the Building	X	X					X			X										
Work & Study Conditions		X							X[6]		X					X[6]			SC-S > OS, SC-S, C	CL-questionable BT-questionable
Class Atmosphere Allows Work				X			X					X			X	X			SC-R, SC-S > OS; C:N.S.D.	
Crowdedness			X			X[2]	X					X		X						
	X[1]	X[1]					-	-	-				X	-	-	-	-	-		
							X			X										
Noise Interference			X				X													
	X[1]												X					X	OS > SC-S, SC-S, C	
		X[1]					X			X										

[1] See Educational Significance Column
[2] Single items drawn from subscales
[6] Based upon District building specifications

TOPIC	SOURCE OF DATA						SIGNIFICANT DIFFERENCES													
							Grade Level Differences				Class Type Differences				Building Type Differences							
								Difference Favors				Difference Favors				Difference Favors						
	Teachers' Attitudes	Students' Attitudes	Observers Reports	Parents' Attitudes	Achievement Tests	N.S.D.	Grade 3	Grade 5	N.S.D. Class Type or Building Type	N.S.D.	SC > OS	OS > SC	N.S.D.	SC-R	SC-S	C	OS	Descriptions of Differences	Educational Significance--- Student Data GL = Grade Level CT = Class Type BT = Building Type
Library/Media Center																				
Library Facilitates Program					X	X						X		X		X	X	SC-R,C,OS> SC-S		
Accessibility of Center			X			X						X					X	OS> SC-R, SC-S, C		
Center Adequate for Program	X[1]					X			X											
Easy to Use the Library		X[1]				X			X											

[1]Single items drawn from subscales

[2]Based upon District Building specifications

CHART I

CLASSROOM TEACHER PREFERENCE

FOR BUILDING TYPE

ACCORDING TO PRESENT CLASS TYPE ASSIGNMENT

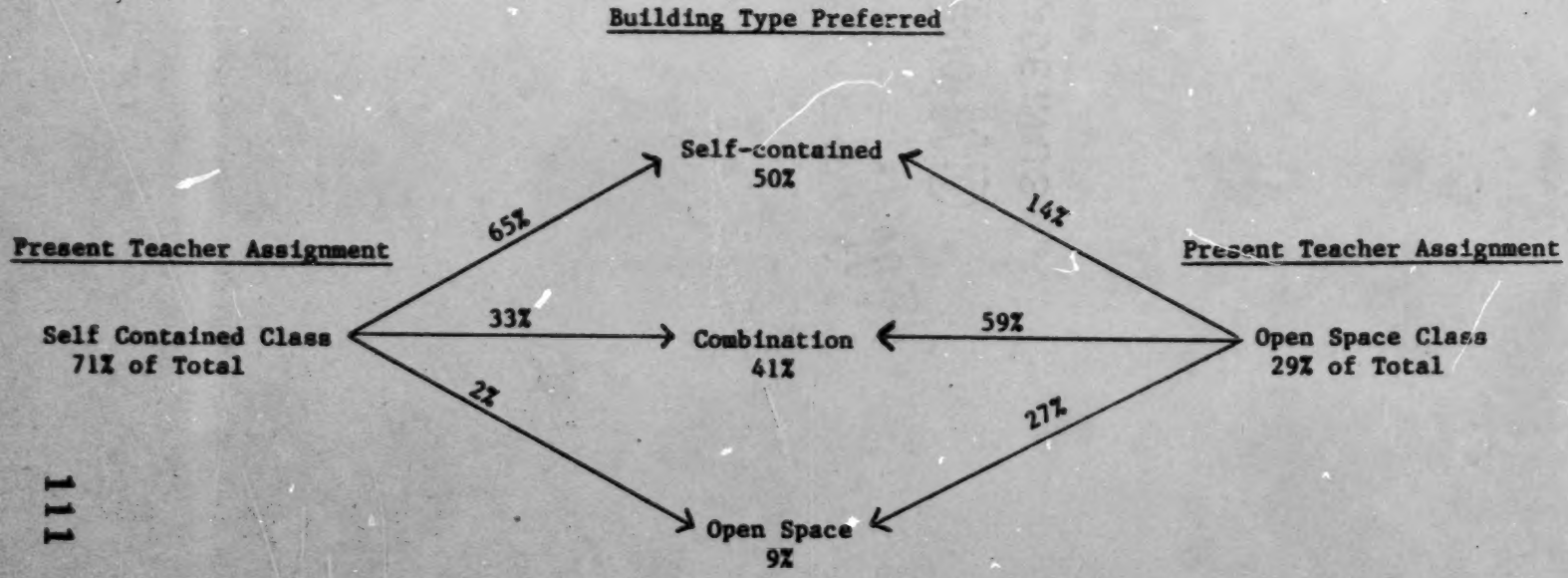
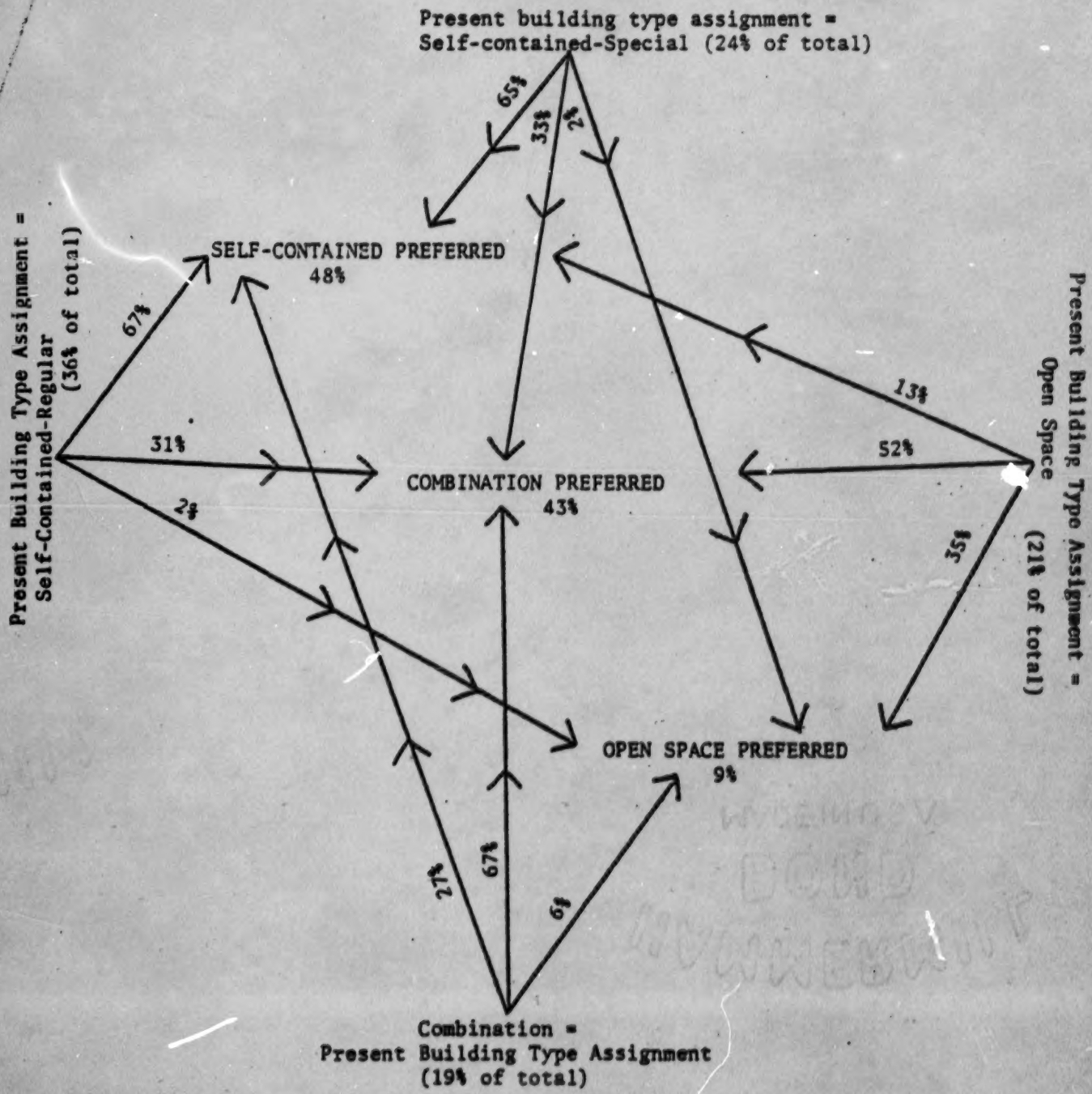


CHART II

TEACHER PREFERENCE FOR

BUILDING TYPE ACCORDING TO

PRESENT BUILDING TYPE ASSIGNMENT



GRADE LEVEL DIFFERENCES

Summary

Although there were no differences between the teachers as classified by class type or among the teachers classified by building type, primary teachers reported a higher level of job satisfaction than intermediate teachers or specialists.

Third grade students were more positive than fifth grade students on several subscales: general school atmosphere, self independence and reliability, opportunity for social interaction, reading and preference for one teacher. Fifth graders were more positive than third graders in their attitudes toward work and study conditions and their acquaintance with other students. All of the grade level differences in student attitudes were very small and were determined to be of questionable educational significance with the exception of opportunity for social interaction which was determined to have moderate educational significance.

Observers of classroom structure, climate and activity rated third grade classrooms higher than fifth grade classrooms on eight of the twenty-three subscales: availability and appropriateness of display materials, frequency of student movement, ease and appropriateness of movement, small groups of students working with an adult, one-to-one interactions of student and adult, student access to and use of materials,

individualization of materials and assignments, and teachers' encouragement of students. Fifth grade classes were rated higher than third grade classes in the number of class size groupings for instruction.

The parent survey data showed no differences between parents classified according to the grade level of their children with one exception: parents of fifth graders reported a higher incidence of multiple teachers for academic subjects.

Implications

1. Do the grade level differences reflect expectations in terms of:

   A. developmental differences of students at the two grade levels?

   B. differences in primary and intermediate teachers' educational philosophies, teaching methods and teaching strategies?

   For example, is the greater number of class size groupings for instruction in fifth grade classes to be expected in terms of differential maturity levels of the students? differences in primary and intermediate teachers' approach to teaching? both? neither?

2. Is there a relationhip among the following differences which favors primary teachers or grade three?

   A. primary teachers' level of job satisfaction.

   B. third grade students' attitudes toward the opportunity for interaction with others,

   C. observers' ratings of third grade classes on these factors: small groupings of students, one-to-one student and teacher instruction, individualization of materials and assignments, and teachers' encouragement of students.

3. Is there a relationship between the following differences?

   A. class size groupings for instruction, 5 > 3.

   B. Individualization of materials and assignments, 3 > 5.

CLASS TYPE AND BUILDING TYPE DIFFERENCES
ROLE OF THE TEACHER
SUMMARY

Class Activities Observer reports showed no class type or building type differences in the subscales related to type of classroom activity: intellectual and cognitive activities, social activities, special activities, application of skills in class, and busy work.

Student and Adult Movement in the Classroom Observer reports revealed no class type or building type differences on three subscales: frequency of student movement, frequency of adult movement, and ease and appropriateness of movement.

Size of Student Groups for Instruction The ratings of classroom observers showed no class type or building type differences on the five subscales related to the size of the student group for instruction: class size grouping, small group of students with an adult, small group of students alone, one-to-one interaction of a student and an adult, and independent study.

Instructional Strategies There were no class type or building type differences in the observer reports of the instructional strategies of teachers: encouraging students, lecturing, guiding or clarifying, and directing or discouraging.

Use of Instructional Materials Classroom observer reports showed no class type or building type differences on two subscales: availability and appropriateness of display materials, and access to and use of materials.

The observers rated the teacher use of individualized materials and assignments higher for open space classes than for self-contained classes and higher for open space buildings compared with the other three building types. The observer ratings of teacher individualization of materials and assignments were higher in combination buildings compared with self-contained regular buildings. There were no differences in the ratings for self-contained special buildings compared with self-contained regular and combination buildings.

Parents were asked: Is your child receiving the help he or she needs at school? Is instruction provided to meet his/her

educational needs (rate, level, special help, etc.)? There were no class type or building type differences in parent responses.

The observer subscale and parent subscale were measuring the same concept of individualization of materials and assignments.

Multiple Teachers for Academics Parents with a child in an open space class area reported a higher incidence of the child experiencing multiple teachers for academic instruction than parents with a child in a self-contained classroom.

In relation to building type, parents representing open space schools reported a higher incidence of multiple teachers than parents representing self-contained-regular and combination buildings whose reports were higher than those parents representing self-contained-special buildings.

There were no class type or building type differences in the classroom observers' ratings of departmentalization. However, in regard to team teaching, there were no class type differences, but observers' ratings for open space buildings were higher than the other three building types.

The students were asked if they would prefer only one teacher for the regular classroom subjects. Students in self-contained classes were more unsure of their preference for one teacher while students in open space classes showed a slight

preference for multiple teachers. The same preference of students was true in self-contained-regular, self-contained-special and combination buildings compared with students in open space buildings. These differences were great enough to be classified as having high educational significance.

Teacher Communication The analysis of teacher ratings showed no class type or building type differences in the effectiveness of communication among the teachers.

However, the classroom observers rated teacher communication and sharing higher in open space classes than in self-contained classes and higher in open space buildings than the other three building types.

Teacher Involvement in School Planning and Evaluation Teachers in open space classes reported a higher level of involvement in school planning and evaluation than teachers in self-contained classes.

Teachers assigned to open space buildings reported a higher level of involvement in these activities than teachers assigned to the other three building types.

Implications

1. Are the lack of class type or building type differences in student and adult movement in the classroom and the size of

student groups for instruction consistent with the premises of open space classes and buildings?

2. What factors might have contributed to:

   A. the discrepancy between parent perceptions and observer ratings of individualization of materials and assignments?

   B. the discrepancy between teacher reports and observer ratings of teacher communication?

3. Are the grade level, class type and building type differences in the areas of multiple teachers for academics consistent with expectations?

4. Are the differences and lack of differences in the following areas logical? Teacher communication, job satisfaction, and involvement in planning and evaluation.

SCHOOL ATMOSPHERE

SUMMARY

Friendly, Likable School and Teachers The items of the general school atmosphere subscale of the student questionnaire described the school as a friendly, comfortable, likable place. Also, the teachers are described as friendly, understanding and liking to teach. The ratings of third graders were higher than

those of fifth graders. Ratings of children in open space class areas were higher than those of students in self-contained classrooms. The ratings of students in open space buildings were higher than those of students in the other three building types. The grade level and class type differences were very slight and were determined to be of questionable educational significance; the building type difference was determined to be of moderate educational significance.

Does the child like school? There were no differences in the perceptions of parents as classified by grade level, class type or building type. The same pattern was evidenced in the parent satisfaction with the teacher's ability.

Parents of children in open space class areas were more positive in rating the teachers as friendly and understanding than the parents with children in self-contained classrooms. However, there were no grade level or building type differences on this subscale.

Does the child like the teacher? Parents with children in open space class areas were more positive than parents with children in self-contained classrooms. Parents with children in self--contained-regular and open space buildings were more positive than parents with children in self-contained-special and combination buildings. There were no grade level differences in parent perceptions.

Parent Perceptions of Children's Attitudes Toward School The analysis of parent reports showed no class type or building type differences on two subscales: the child likes academics and the child likes extracurricular activities.

There were no class type differences in the parent reports of children's attitude toward special subjects. However, the reports of parents representing self-contained-regular and open space buildings were more positive than those of parents representing self-contained-special and combination buildings.

Implications

What might have contributed to the building type differences in:

1. parent perceptions of the child liking the teacher?

2. parent perceptions of the child liking special subjects?

3. student attitudes toward the general school atmosphere?

STUDENT PERSONAL AND SOCIAL DEVELOPMENT

SUMMARY

Discipline There were no classroom type or building type differences in the classroom observer ratings of student involvement and student respect.

The same pattern was evidenced in parent ratings of the adequacy of discipline and the need for teachers to be more strict.

Student Independence and Responsibility There were no class type or building type differences in parent perceptions or student reports of the degree to which the students were developing self independence and responsibility.

Student Self-Concept and Social Development There were no class type or building type differences in the parent reports of the degree to which 1) the child was happy with his interaction with other students, 2) the satisfactory progress of the child in working and playing with other children and 3) the child was developing a positive view of himself/herself.

In reporting the opportunities for student interaction with the principal, teachers, other students and members of the community, the ratings of students in open space classes were higher than those of students in self-contained classes. The ratings of students in open space buildings were higher than those of students in the other three building types. These class type and building type differences were great enough to be classified as having high educational significance.

In reporting positive impressions of self and relations with others, the ratings of students in open space classes were

higher than those of students in self-contained classes. The ratings of students in open space and self-contained-regular buildings were higher than those of students in the other two building types. However, both of these differences were small and were classified as having questionable educational significance.

Students were asked to respond to the statement: "I know most of the students in my grade level at this school." There were no class type differences; however, more students in open space and self-contained-special buildings responded "yes" than students in the other two building types. This difference was classified as having high educational significance.

Implications

1. Is the lack of class type and building type differences in student involvement and student development of independence and responsibility consistent with the premises of open classes and buildings?

2. Is the lack of class type and building type differences in in discipline consistent with stereotypes of self-contained and open space areas?

3. What might have contributed to the building type differences in the parent perceptions of the child's satisfactory progress in social development and the student reports of their relationships with others?

4. What might have contributed to the building type differences in the student reports of their acquaintence with other students?

STUDENT ACADEMIC DEVELOPMENT

SUMMARY

Student Application of Learning The analysis of the ratings of both students and classroom observers suggested no class type or building type differences in student application of learning.

Reading There were no class type or building type differences in the degree to which parents were satisfied with their child's progress in reading. However, a grade level by class type interaction was noted. Parents with third grade children in open space class areas were more positive about their child's progress in reading than the parents with children in third grade self-contained classrooms. The reverse was true for the parents of fifth graders.

Students were asked if they enjoyed the things they did in reading class and if they felt they were learning a lot in reading class. The attitudes of students in open space areas toward reading were more positive than those of students in self-contained classrooms. However, the difference was small and classified as having questionable educational significance. The attitudes of students in open space buildings toward reading were more positive than those of students found in the

other three building types. The difference was classified as having moderate educational significance.

In analyzing the data on student attitudes toward reading, one significant interaction classified as having high educational significance was noted. According to class type, third grade students were equivalent; however, fifth grade students in open space class areas were more positive than fifth grade students in self-contained classrooms.

Math Students were asked if they enjoyed the things they did in math and if they felt they were learning a lot in math. Parents were asked if their child was showing satisfactory progress in math. No significant differences between class types or among building types were shown.

However, two significant interactions were determined: student reports, grade level by class type; and parent perceptions, grade level by building type.

Third graders in self-contained classrooms were more positive about math than third grade students in open space class areas. The reverse was true for fifth graders. However, since the difference was slight, it was classified as having questionable educational significance.

The parents of third graders were consistently higher than the parents of fifth graders in rating their child's math program as satisfactory with the exception of those parents of third

grade students in a self-contained-special school. The ratings of these parents were significantly lower.

Parent Satisfaction with the Child's Academic Progress There were no class type or building type differences in the parents' satisfaction in four areas: the learning program provides enough direction and structure for the child, there is enough emphasis on the 3 R's, the child is showing satisfactory progress in language skills and the child is showing satisfactory progress in science.

Differences in parent satisfaction with the child's progress in math and reading were summarized in the previous sections.

Academic Achievement After correcting for differences in scholastic aptitude, the academic achievement in reading, language arts and mathematies, as measured by the SRA Achievement Tests for fifth grade students in open space and self-contained classrooms was equivalent.

Implications

1. Are the differences and lack of differences according to class type and building type in student academic development consistent with expectations and/or stereotypes of open space and self-contained class areas?

2. What might have contributed to the following?

   A. The building type differences in student perceptions of reading.

   B. The discrepancy between the student perceptions and parent perceptions of student progress in reading as shown in the grade level by class type interactions.

   C. The low ratings of satisfactory student progress in mathematics by parents with a child in grade three of a self-contained-special building.

SCHOOL AND COMMUNITY RELATIONS AND COMMUNICATIONS

SUMMARY

Parent Satisfaction with Reporting System Although there were no classroom type or building type differences in the degree to which parents felt informed about their child's progress or building type differences in parent satisfaction with the reporting system, parents with a child in a self-contained classroom reported a higher level of satisfaction with the reporting system than parents with a child in an open space class area. There were no building type differences in the level of parent satisfaction with the reporting system.

Parent Perceptions of School and Community Relations There were no class type or building type differences in parent perceptions of home and school communication and overall satisfaction with the school.

Although no class type differences were shown, parents representing self-contained-regular and open space buildings reported a higher level of local community support for the school than the parents representing self-contained-special or combination buildings.

Parents with a child in an open space class report a greater number of visits to the class while it was in session than the parents with a child in a self-contained classroom.

Parents representing open space buildings reported a higher incidence of class visitation than parents representing self-contained-regular. There were no differences among the parents representing combination and self-contained buildings when compared with the other two building types.

Implications

1. What factors might have contributed to the following?

   A. the building differences in parent reports of the community support of the school.

B. the class type difference in parent satisfaction with the reporting system.

C. the class type and building type differences in parent visitation.

2. In terms of class type, could there be a relationship among the following parent reports?

A. Informed about child's progress (N.S.D.).

B. Satisfaction with reporting system (SC>OS).

C. School visitation (OS> SC).

BUILDING DESIGN AND FACILITIES

SUMMARY

There were no class type or building type differences in the teacher and student ratings on subscales related to the adequacy of the building.

In rating the work and study conditions, the responses of students in self-contained-special buildings were more positive than the students housed in the other three building types. However, this difference was classified as having questionable educational significance. There were no class type differences on the subscale.

In rating the degree to which the class atmosphere allows the child to complete the work, parents with a child in a self-contained class were more positive than the parents with a child in an open space class. Parents representing self-contained-regular and self-contained-special buildings were more positive than parents representing open space buildings. Parents representing combination buildings were not different from the parents representing the other three building types.

Classroom observers rated self-contained classrooms as being more crowded than open space class areas. There were no building type differences.

However, data from the previous year on space utilization showed the utilization of space in open space classes to be 91 per cent and in self-contained to be 78 per cent.

Due to this discrepancy, the responses to individual items were examined: teacher responses to item 19, Overcrowding is a problem in our school; and student responses to item 1) (R) My school is too crowded and item 36) It's possible to do school work without being bothered by others. There were no class type or building type differences in teacher or student responses on any of the preceding individual items.

Classroom observers rated the noise interference to be higher in open space classes compared with self-contained classes and higher in open space buildings when compared with the other three building

types. Responses of teachers and students to individual items related to noise were analyzed: teacher responses to item 24(R) My instructional program is distrubed by the noise of others, and student responses to item 43(R) Most of the time, noise bothers me while I'm doing my school work. There were no class type or building type differences in teacher or student responses on the individual items.

Library/Media Center Parents were asked: Do you feel that the school library program facilitates the educational program for your child? Parents with a child in an open space class area were more positive than parents with a child in a self-contained classroom. Parents representing self-contained-regular, combination and open space buildings were more positive than parents representing self-contained-special buildings.

Classroom observer ratings of accessibility of the media center were higher for open space classes compared with self-contained classes and were higher for open space schools compared with the other three building types.

Responses to individual items related to the library/media center were examined: teacher responses to item 27: Our Library/Media Center is adequate for the instructional program and student responses to item 20: It is easy for me to use the school library. There were no class type or building type differences in teacher or student responses on the individual items.

Implications

1. Is the grade level difference in student reports of noise interference consistent with the developmental differnces of students at the two grade levels?

2. Is the discrepancy between the lack of class type and building type differences in teacher and student ratings of noise interference and the class type and building type differences of observer reports to be expected?

3. What might have contributed to the discrepancy among the following?
   A. the class type differences in observer reports of crowdedness (SC > OS).

   B. the lack of class type differences in teacher or student ratings of crowdedness.

   C. the class type differences according to district building specifications (OS > SC).

   Could adaptation of teachers and students to the environment and visual perceptions of observers be contributing factors?

4. Is the lack of grade level, class type and building type differences in the teacher and student reports of the adequacy of the building to be expected?

5. Recognizing existing architectural differences, are the building type differences in parent and observer ratings

of the Library/Media Centers to be expected?

6. In terms of building type, how would the collections of the elementary school Library/Media Centers be rated according to the guidelines of the Colorado State Department of Education? (See Appendix VII)

Teacher Preference For Building Types Teachers in self-contained classrooms prefered self-contained buildings. Teachers in open space class areas preferred combination buildings. As a total group, the discrepancies between the classroom teachers' preference for self-contained versus open space buildings were greater than self-contained versus combination buildings. Although 71 per cent of the classroom teachers were assigned to self-contained classrooms, the teachers were equally divided in their preference for self-contained versus the other building types, combination and open space.

Teachers assigned to self-contained buildings prefer self-contained buildings. Teachers assigned to combination or open space buildings prefer combination buildings. Although the assignment of teachers to building types was self-contained, 60 per cent, combination, 19 per cent and open space, 21 per cent; the preference for building type of the total group of teachers was self-contained, 48 per cent, combination, 43 per cent, and open space 9 per cent.

Implications

What might contribute to the following?

1. The preference for combination buildings by one-half of the teachers in open space buildings and one-third of the teachers in self-contained buildings.

2. The low number of teachers preferring to teach in open space buildings? What effect might this factor have upon staffing any future open space schools?

GENERAL IMPLICATIONS

1. Is there a relationship between the lack of class type and building type differences in observer ratings of class size groupings, student involvement, and individualization of materials and assignments?

2. What are the ramifications of the following discrepancies?

   A. a high level of teacher preference for combination buildings.

   B. the building type differences in parent perceptions of the community support of the school (SC-R, OS > SC-S, C).

   C. the building type differences in the student reports of opportunities for interaction with others (OS > SC-S, C, SC-R) and acquaintance with other students (OS, SC-S > SC-R, C). To what degree is it desirable for the student, parent and professional staff to have alternatives in class type for student placement?

3. Could there be a relationship between the class type and building type differences in teacher reports of involvement in program planning and evaluation and the following?

   A. parent perceptions of teacher individulization of assignments and materials.

B. parent reports and observer ratings of multiple teachers for academics.

C. observer ratings of teacher communication and sharing.

D. observer ratings of team teaching.

4. To what degree have the staff selection procedures and staff development activities affected the building type differences in favor of open space schools?

5. Is the application of open space teaching methodologies limited to open space class areas? Is the application of self-contained teaching methodologies limited to self-contained classrooms?

6. To what degree do the class type and building type classifications reflect the actual differences in educational philosophies, teaching methods and teaching strategies in classes and buildings? Theorists in testing and measurement refer to the "jingle-jangle" fallacy:

Jingle: Tests with the same names measure different things.

Jangle: Tests with different names measure the same things.

To what degree does this fallacy apply to the classification labels used in this study?

RECOMMENDATION

The results of the study may have implications for the design of district elementary schools in the future. However, the unique characteristics and values of the community to be served by the school and the educational philosophy of the school professional staff should be templates for viewing the results and making the decisions of "appropriate" or "inappropriate" related to architectural and educational program design.

APPENDIX I

LISTING OF SCHOOLS BY BUILDING TYPE

APPENDIX I
LISTING OF SCHOOLS
ASSIGNED TO BUILDING-TYPE CLASSIFICATIONS

Category 1	Grades	Enrollment 4/10/75
SELF-CONTAINED - REGULAR		
Arapahoe-Douglass	K-6	716
Burke	K-6	312
Emerald	K-6	596
Kohl	K-6	660
Majestic Heights	K-6	301
Martin Park	K-6	446
Paddock	K-6	502
Columbine	K-6	581
Category 2		
SELF-CONTAINED - SPECIAL		
Lafayette	K-4	540
Lincoln	K-6	167
Louisville	K-4	262
Mapleton	K-6	181
Nederland	K-6	275
Uni-Hill	K-6	441
Washington	K-6	332
Whittier	K-6	265
Category 3		
COMBINATION		
Crest View	K-6	731
Mesa	K-6	548
Aurora 7	K-6	465
Foothill	K-6	534
Category 4		
OPEN SPACE		
Bear Creek	K-6	500
Birch	K-6	354
Eisenhower	K-6	731
Flatirons	K-6	335
Heatherwood	K-6	758

Schools not included in the study:

Jamestown
Gold Hill
Middle Schools

APPENDIX II

TEACHER QUESTIONNAIRE

Alternative Building Design Study Committee
Boulder Valley School District
Spring 1975

TEACHER QUESTIONNAIRE

Indicate how strongly you agree or disagree with each of the following statements by writing the number of the answer you select on the line in front of each statement. There are no right or wrong answers; please respond the way you honestly feel. Responses will be completely anonymous.

Answers:
1. Strongly Disagree
2. Disagree
3. Agree
4. Strongly Agree

____ 1. Teachers are encouraged and assisted in developing objectives and goals for our school.

____ 2. Responsibilities in program implementation are clearly defined.

____ 3. Discipline is a major problem in our school.

____ 4. Audio-visual equipment and teaching materials are easily accessible in our building

____ 5. Adequate preparation is provided by the building administration for beginning teachers, those new to the district, and/or those new to the building.

____ 6. In our building, teachers are sensitive to and show respect for the opinions and beliefs of students.

____ 7. I obtain personal satisfaction from my position as a member of this faculty.

____ 8. Architectural design of our building facilitates individualized instruction.

____ 9. Para-professionals in our building feel free to discuss,with their teachers, problems that may exist.

____ 10. In our school, teachers are actively involved in curriculum development.

____ 11. I can effectively handle my teaching load.

____ 12. There is adequate flexibility in our school building design to allow teachers to work in teams if they so desire.

____ 13. Teachers participate in setting the long range goals and objectives for the school.

____ 14. Teachers in this building take initiative in suggesting changes to improve effectiveness rather than waiting for instructions.

____ 15. Storage space is adequate in our building.

____ 16. I look forward to each school day.

____ 17. Physical facilities in our building permit variable groupings of students for most learning situations.

Answers:
1. Strongly Disagree
2. Disagree
3. Agree
4. Strongly Agree

___ 18. In-service work is related directly to areas of faculty concern.

___ 19. Overcrowding is a problem in our building.

___ 20. Teachers solicit feedback on their teaching strategies and objectives from other teachers.

___ 21. There is time and opportunity to provide attention to those students who need extra help.

___ 22. Floor space is utilized efficiently in our building.

___ 23. In our building, teachers are sensitive to and show respect for the opinions and beliefs of other teachers.

___ 24. My instructional program is disturbed by the noise of others.

___ 25. Students are often discourteous at this school.

___ 26. In our building, teachers deal openly and frankly with conflict and/or issues in meetings.

___ 27. Our school Library/Media Center Facility is adequate for the instructional program.

___ 28. The program schedule hinders my effectiveness as a teacher.

___ 29. Within our building, teachers observe other classrooms.

___ 30. I am satisfied with the basic architectural concept of this building.

___ 31. Teachers feel free to discuss with the principal any problems affecting their teaching.

___ 32. The attainment of school goals is evaluated on a regular basis.

* *

A. Teaching Level (check one)

_____ 1. Primary (K-3)
_____ 2. Intermediate (4-6)
_____ 3. Specialist (K-6)

B. Classroom Teachers Only (check one)

My teaching area is
_____ 1. Self-Contained Classroom
_____ 2. Open Space

C. Number of years of teaching in a self-contained classroom_____

D. Number of years of teaching in open space_____

E. If this building were to be closed next year and a new building opened, which type of building would you prefer. Assume a compatible staff and a reasonable teaching load exists in all situations. (check one)

_____ 1. Self-Contained Classrooms
_____ 2. Combination (with both self-contained classrooms & open space)
_____ 3. Open Space

APPENDIX III

STUDENT QUESTIONNAIRE

Alternative Building Design Study Committee
Boulder Valley School District
Spring 1975

STUDENT QUESTIONNAIRE

Below is a list of statements that tell how some students feel about school and about themselves. Read each statement carefully and then decide if you agree with the statement, if you disagree with the statement, or if you are not sure how you feel. We will use a number to stand for each answer. For each statement you are to put the number that stands for the answer you choose on the line in front of the statement. Here is the list of answers:

1 = Disagree (you disagree with the statement, it is not true for you)
2 = Not Sure (you are not sure if the statement is true or not true for you)
3 = Agree (you agree with the statement, it is true for you)

Remember there are no right or wrong answers--just put down the number that tells how you feel about each statement.

Examples: _____ My school is in the United States.
_____ I do not like candy.

_____ 1. My school is too crowded.

_____ 2. Most of the teachers at my school are very friendly and understanding.

_____ 3. If I don't understand an assignment I put off doing the work as long as possible.

_____ 4. I can make up my mind without too much trouble.

_____ 5. I really like my school.

_____ 6. There is no good place at school for me to be by myself to think through a problem or work alone.

_____ 7. I feel that I am learning a lot in reading class.

_____ 8. Many of the things I learn in school will help me in things I might do outside of school.

_____ 9. I am able to go ahead and get started on my work without the teacher telling me what to do.

_____ 10. Lots of students at this school want to be my friend.

_____ 11. Most mornings I look forward to coming to school.

_____ 12. I feel that most of what we learn in school is important and will be useful to me.

_____ 13. I usually enjoy the things we do in math class.

_____ 14. If I had a choice, I would like just one teacher to teach all the regular classroom subjects.

_____ 15. I can think of many ways to solve my problems.

_____ 16. I am a hard worker.

_____ 17. The principal and teachers here let me know if they think I've done a good job.

_____ 18. I think that I am an interesting person.

Disagree (you disagree with the statement, it is not true for you)
Not Sure (you are not sure if the statement is true or not true for you)
Agree (you agree with the statement, it is true for you)

_____ 19. I usually enjoy the things we do in reading class.

_____ 20. It is easy for me to use the school library.

_____ 21. When I try to do something I am successful.

_____ 22. I know most of the students in my grade level at this school.

_____ 23. My teacher(s) spends a lot of time telling students to be quiet or to behave.

_____ 24. This school has helped me develop hobbies and interests.

_____ 25. There is a place for me to keep my own personal things.

_____ 26. I find it very hard to talk in front of the class.

_____ 27. There are chances for students in the same grade level to work together.

_____ 28. In my school it is too far to walk from one place to another.

_____ 29. At this school we get to do special activities that I enjoy.

_____ 30. Other students usually follow my ideas or do things that I suggest.

_____ 31. There are chances for older and younger students to work together.

_____ 32. I can be depended on.

_____ 33. At school, I have a chance to use what I learn in class.

_____ 34. In my school, it is easy to find different places.

_____ 35. It takes me a long time to get used to anything new.

_____ 36. It is possible to do my school work without being bothered by other students.

_____ 37. I feel that I am learning a lot in math class.

_____ 38. This school is a friendly place.

_____ 39. If something is bothering me, I try to solve the problem.

_____ 40. My school is a comfortable place.

_____ 41. People from the community come to our school to share things.

_____ 42. There is a lot of time wasted at this school.

_____ 43. Most of the time at school, noise bothers me while I'm doing my school work.

_____ 44. There is enough space in this school for children to work in small groups.

_____ 45. Teachers at this school like to teach.

_____ 46. I am very proud of my school.

APPENDIX IV

CLASSROOM OBSERVATION FORM

Building Type: 1 2 3 1
Classroom (area): 1 2
Grade Level(s): 1 2 3 4 5 6
Observer: 1 2 3 4 5

CLASSROOM OBSERVATION FORM

1 = None, not at all
2 = Seldom, to a slight degree, a few students
3 = Sometimes, to a moderate degree, some or several students
4 = Frequently, to a large degree, many or most students
5 = Always/Consistently, on all possible occasions, all or almost all students

A. Physical Facilities/Use of Space/Physical Environment

___ 1. Furniture arrangement seems to interfere with classroom (area) operation
___ 2. Classroom (area) seems crowded re: students
___ 3. Crowdedness re: number of students seems to interfere with classroom (area) operation
___ 4. Classroom (area) seems crowded re: furniture, materials, etc. (things)
___ 5. Crowdedness re: furniture, materials, etc. seems to interfere with classroom (area) operation
___ 6. Aspects of the visual environment appear to interfere with students' concentration and or instructional activities (note nature of interference)
___ 7. Aspects of the visual environment appear to interfere with teacher(s)' concentration and/or instructional activities (note nature of interference)
___ 8. Noise appears to interfere with students' concentration and/or instructional activities (note source of noise/type of noise)
___ 9. Noise appears to interfere with teacher(s)' concentration and/or instructional activities (note source of noise/type of noise)
___10. Adequate space is available for bulletin boards and displays
___11. Student work is displayed (projects, art, books, papers, etc.)
___12. Displays are related to instructional program
___13. Supplies and materials are easily accessible to students
___14. There is easy access to the library/media center
___15. Adequate space is available for students to work in small groups

B. Traffic and Movement

___ 1. Amount/frequency of movement of students
___ 2. Amount/frequency of movement of adults
___ 3. Adult(s) move about with ease
___ 4. Students move about with ease
___ 5. Purpose/productivity to the movement of students
___ 6. Movement of class size group(s) seems to interfere with the instructional program (i.e. groups other than group being observed)

1 = None, not at all
2 = Seldom, to a slight degree, a few students
3 = Sometimes, to a moderate degree, some or several students
4 = Frequently, to a large degree, many or most students
5 = Always/Consistently, on all possible occasions, all or almost all students

B. Traffic and Movement (continued)

7. Movement of individuals or small group(s) seems to interfere with the instructional program (note if from group being observed or from other classes)

C. Class Activities and Grouping

*Size/Nature of Groups

		Grade level of students					
1.	Larger than class size group (combination of classes)	1	2	3	4	5	6
2.	Class size group	1	2	3	4	5	6
3.	Small group - students and adult	1	2	3	4	5	6
4.	Small group - students alone	1	2	3	4	5	6
5.	One-to-one - student and adult	1	2	3	4	5	6
6.	Independent study - student working alone	1	2	3	4	5	6

*Purpose of Activity

7. Intellectual/Cognitive
8. Social/Affective
9. Psychomotor/Complementary Skill/Special Activity
10. Opportunity to use or apply skills learned in classwork
11. Diversion/Busy Work

*Materials and Assignments

12. Indications that a variety of teaching/learning materials are used within a given curriculum area (math, reading, etc.)
13. Indications that teacher and/or student-prepared materials are used as well as well as commercial materials
14. Indications of efforts to match materials to needs of students (ability level, interest, etc.)
15. Indications of differential assignments to different students (i.e. students doing different activities, based on ability, interest, etc.)
16. Indications of sharing of supplies and materials among students

1 = None, not at all
2 = Seldom, to a slight degree, a few students
3 = Sometimes, to a moderate degree, some or several students
4 = Frequently, to a large degree, many or most students
5 = Always/Consistently, on all possible occasions, all or almost all students

D. Student Behavior

____ 1. Students appear to be actively involved in designated activities
____ 2. Students appear to be bothering other students, interfering with class activities
____ 3. Students appear to be interested in their activities
____ 4. Students show pride in their classroom and/or school
____ 5. Indications of a lack of respect for school property
____ 6. Indications of a lack of respect for property of others
____ 7. Indications of a lack of respect/cooperation toward one another
____ 8. Indications of a lack of respect/cooperation toward adults (teacher/aide)

E. Teacher Behavior

*Teacher-Student Interaction

____ 1. Indications of teacher encouraging students (praising, complimenting, reassuring, showing acceptance, etc.)
____ 2. Indications of teacher presenting information to students (lecturing, demonstrating, visualizing, etc.)
____ 3. Indications of teacher assisting students (guiding, elaborating, clarifying, etc.)
____ 4. Indications of teacher analyzing students or their work (checking, inquiring, recording)
____ 5. Indications of teacher directing students (structuring, regulating, enforcing, controlling, manipulating, etc.)
____ 6. Indications of teacher discouraging students (ignoring, threatening, moralizing, accusing, reprimanding, negatively criticizing, etc.)

*Teacher-Teacher Interaction

____ 7. Indications of departmentalization (teachers cooperating by dividing planning and/or instruction according to curriculum areas). Note re: nature/purpose
____ 8. Indications of "team teaching" (teachers cooperating by dividing planning and/or instruction according to teacher strengths or student needs, i.e. ability level, learning style, interests, etc.). Note re: nature/purpose
____ 9. Indications of communication between teachers regarding curriculum issues
____ 10. Indications of communication between teachers regarding student issues (needs, behaviors, etc.)
____ 11. Indications of sharing of supplies and materials among teachers

---

Number of students: _____

Number of adults: _____

_____teacher(s) _____student teacher(s) _____aide(s) _____volunteer(s)

Notes re: location or position of adults:

List three events, issues or aspects of this situation that you feel were most positive:

List three events, issues or aspects of this situation that you feel were most negative or represented concerns:

APPENDIX V

PARENT QUESTIONNAIRE

Alternative Building Design Study Committee
Boulder Valley School District
Spring 1975

Parent Interview (via Telephone)

Building Type: 1 2 3 4
Classroom: 1 2
Grade Level: 3 5
Number of years family has attended this school_____

1 = No
2 = Undecided, Not Sure, Mixed Feelings
3 = Yes

_____ 1. Do you feel that there is good communication between home and school?

_____ 2. Are you satisfied with the type of grading and reporting system used at your child' school?

_____ 3. Have you been kept well informed about your child's progress during this school yea

_____ 4. Do you feel that your child is happy with his/her school situation, does he/she lik school? Does he/she like the following aspects of school:

_____ Academic subjects (Reading, Math, Language, Writing, Science)
_____ Special subjects (Music, P.E. and Art)
_____ Extra-curricular activities (crafts, electives, special projects)
_____ Interaction with other students
_____ Interaction with teachers

_____ 5. Is there enough emphasis on the "3 R's" in your child's school?

_____ 6. Is your child receiving the help he or she needs at school? Is instruction provide to meet his/her educational needs (rate, level, special help, etc.)?

_____ 7. Do you feel that teachers at your child's school should be more strict with the children?

_____ 8. Does the learning program provide enough direction and structure for your child?

_____ 9. Does the classroom (or area) atmosphere allow your child to do his/her work?

_____ 10. Is there adequate discipline/direction/classroom control at your child's school?

_____ 11. Do you feel that the school library program facilitates the educational program for your child?

12. Is your child showing satisfactory progress in the following areas: __ Reading __ Math __ Language Skills (Writing, Spelling, Grammar, etc.) __ Science

_____ 13. Is your child showing satisfactory progress in working and playing with other children?

_____ 14. Is your child developing a positive view of himself/herself?

_____ 15. Is your child developing independence and responsibility?

_____ 16. Are teachers at your child's school friendly and understanding?

___ 17. Does your child have more than one teacher for academic instruction (not considering Music, P.E. and Art)? (If "no", do not ask the following question.)

___ 18. Was it advantageous for your child to have more than one teacher during this year?

___ 19. Do you feel your child's teacher(s) is (are) doing a good job?

___ 20. Do you feel that the local community (i.e. your attendance area) supports the school (is in favor of the manner in which the school operates)?

___ 21. Have you visited/observed your child's class while it was in session? (If "no", do not ask the following question.)

___ 22. Did you like what you observed?

23. What do you feel has been the major advantage or greatest strength of your child's school situation (experience) during this year?

24. What do you feel has been the major disadvantage or greatest weakness (concern) of your child's school situation (experience) during this year?

25. How would you describe your overall level of satisfaction with the quality of your child's school?

___ 1. Very dissatisfied

___ 2. Generally dissatisfied

___ 3. Neutral, or mixed feelings

___ 4. Generally satisfied

___ 5. Very satisfied

26. Any comments regarding open-space or self-contained classrooms:

APPENDIX VI

LETTER TO PARENTS

BOULDER VALLEY PUBLIC SCHOOLS
Barnard D. "Pat" Ryan, Superintendent
P.O. BOX 11
BOULDER, COLORADO 80302
(303) 447-1010

MELVIN L. WIESLEY
Director of Elementary Education

May 22, 1975

Dear Parents:

Boulder Valley School District is in the process of collecting a comprehensive set of information related to the different types of elementary school buildings (self-contained, open-space and combination) and the types of programs that are currently operating within these buildings. An analysis of academic achievement of students in different types of buildings has already been completed. We are currently involved in the collection of information from teachers, students, and parents as well as conducting observations in a sample of classrooms across the district. Northern Colorado Educational Board of Cooperative Services (NCEBOCS), which provides educational services for six school districts in northern Colorado, has been asked by Boulder Valley School District to plan and coordinate the procedures necessary for the collection and analysis of this information.

Staff at NCEBOCS have selected a random sample of parents representing all elementary schools in the district. Representatives of NCEBOCS will be telephoning this sample of parents during the last week of May and the first week of June. Names will not be placed on the sheet used to record parent's responses to the questions. No school or district staff will see the response sheets. The information will be grouped for analysis according to the building types noted in the paragraph above. Results of these analyses will be provided to the district and will be available to interested parents after the report has been submitted to the school board.

The purpose of this letter is to let you know that this project has been officially requested by the school board and the administrative staff of Boulder Valley School District and that your family is included in the random sample. Your cooperation with the telephone interviewer will be greatly appreciated. The staff and school board are genuinely interested in the opinions and suggestions of parents, and plan to incorporate parents' reactions into future planning with the goal of continuing to to improve the educational program at all schools.

Sincerely,

Melvin L. Wiesley

MLW:mh

APPENDIX VII

RATINGS OF THE SPRING 1975 COLLECTIONS OF LIBRARY/MEDIA CENTERS IN TERMS OF STATE DEPARTMENT GUIDELINES

APPENDIX VII

Ratings of the Spring 1975 Collections of Library/Media Centers in Terms of State Department Guidelines

Self-contained - Regular Category 1	Number of Print Items Per Pupil	Rating*	Number of Nonprint Items Per Pupil	Rating*
Arapahoe/Douglass	16/15	1/1	2/3	Below 1/Same
Burke	18	1	3	Below 1
Emerald	12	1	2	Below 1
Kohl	11	1	2	Below 1
Majestic Heights	15	1	2	Below 1
Martin Park	23	3	7	1
Paddock	15	1	3	Below 1
Columbine	15	1	4	Below 1
Self-contained - Special Category 2				
Lafayette	12	1	1	Below 1
Lincoln	28	1	17	1
Louisville	23	1	2	Below 1
Mapleton	23	1	1	Below 1
Nederland	14	1	2	Below 1
Uni-Hill Prim/Inter	20/17	1/1	1/2	Below 1
Washington	18	1	6	Below 1
Whittier	22	1	13	1
Combination Category 3				
Crest View	13	1	3	Below 1
Mesa	10	1	2	Below 1
Aurora 7	15	1	4	Below 1
Foothill	15	1	4	Below 1
Open Space Category 4				
Bear Creek	11	1	3	Below 1
Birch	11	1	4	Below 1
Eisenhower	13	1	4	Below 1
Flatirons	17	1	1	Below 1
Heatherwood	7	Below 1	1	1

Schools not included in the study: Jamestown, Gold Hill, Middle Schools

*Collection recommended in the Colorado State Department of Education Guidelines for Colorado School Media Programs: 1 = minimum, 2 = intermediate, 3 = ideal

However, quantity can be an inadequate measure of adequacy of the collection in older buildings where obsolescence can be a factor.